

EXHIBIT 1

In The Matter Of:

*Fair Fight Action v.
Raffensperger*

*Michael C. Herron, Ph.D.
February 26, 2020*

*Regency-Brentano, Inc.
13 Corporate Square
Suite 140
Atlanta, Georgia 30329
404.321.3333*



REGENCY-BRENTANO, INC.
Certified Court Reporters

Min-U-Script® with Word Index

1 UNITED STATES DISTRICT COURT
2 NORTHERN DISTRICT OF GEORGIA
3 ATLANTA DIVISION

-----x

4 FAIR FIGHT ACTION, INC., et al.,

5 Plaintiffs,

6 -vs-

Case No.
1:18-cv-05391-SCJ

7 BRAD RAFFENSPERGER, in his official
8 Capacity as Secretary of State of
9 Georgia, et al.,

10 Defendants.

-----x

February 26, 2020
9:14 a.m.

11
12
13
14 Deposition of MICHAEL C. HERRON,
15 Ph.D., a Witness on Behalf of Plaintiffs,
16 taken by the Defendant, pursuant to Notice,
17 at the offices of Jenner & Block, LLP, 919
18 Third Avenue, New York, New York, before
19 Darby Ginsberg, RPR, a Notary Public of the
20 State of New York.
21
22
23
24
25

1 APPEARANCES:

2
3 JENNER & BLOCK, LLP

4 Attorneys for Plaintiffs

5 919 Third Avenue

6 New York, New York 10022-3908

7 (212) 891-1600

8 BY: JEREMY M. CREELAN, ESQ.

9 jcreelan@jenner.com

10 KATHRYN WINBRANDT, ESQ.

11 kwynbrandt@jenner.com

12 TASSITY JOHNSON, ESQ.

13 tjohnson@jenner.com

14
15 KAISER DILLON, PLLC

16 Attorneys for Plaintiffs

17 1099 14th Street, N.W.

18 Washington, DC 20005

19 (202) 640-2850

20 BY: SARAH R. FINK, ESQ.

21 sfink@kaiserdillon.com

Michael C. Herron, Ph.D. - February 26, 2020

3

1 APPEARANCES: (CONT.)

2
3 ROBBINS, ROSS, ALLOY,

4 BELINFANTE, LITTLEFIELD, LLC

5 Attorneys for Defendants

6 500 14th Street, N.W.

7 Atlanta, Georgia 30318

8 (678) 701-9381

9 BY: JOSH B. BELINFANTE, ESQ.

10 jbelinfante@robbinsfirm.com

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Regency-Brentano, Inc.

1 STIPULATIONS

2

3 IT IS HEREBY STIPULATED AND AGREED, by

4 and between counsel for the respective

5 parties hereto, that all objections, except

6 as to form, are reserved to the time of

7 trial.

8 IT IS FURTHER STIPULATED AND AGREED

9 that the deposition may be signed and sworn

10 to before any officer authorized to

11 administer an oath.

12 IT IS FURTHER STIPULATED AND AGREED

13 that the sealing and filing of the

14 deposition be waived.

15

16

17

18

19

20

21

22

23

24

25

Michael C. Herron, Ph.D. - February 26, 2020

5

1 MICHAEL C. HERRON, Ph.D.,

2 called as a witness, having been first
3 duly sworn, was examined and testified
4 as follows:

5 MR. BELINFANTE: Good morning,
6 Dr. Herron. My name is Josh
7 Belinfante. I represent the defendants
8 in this case.

9 And this is the deposition of Dr.
10 Herron for purposes of discovery and
11 all the purposes allowed under the
12 Federal Rules of Civil Procedure. I
13 would propose reserving all objections
14 except to privilege and form of the
15 question until the first time of use.
16 Is that agreeable?

17 MR. CREELAN: That's agreeable.
18 That's my understanding as well.

19 MR. BELINFANTE: Okay. Great.

20 EXAMINATION

21 BY MR. BELINFANTE:

22 Q. Dr. Herron, could you just state
23 and spell your name for the record?

24 A. Sure. Michael Charles Herron.

25 M-I-C-H-A-E-L, C-H-A-R-L-E-S, H-E-R-R-O-N.

Michael C. Herron, Ph.D. - February 26, 2020

6

1 Q. And, Dr. Herron, have you been
2 deposited before?

3 A. I have.

4 Q. Okay. So you know the general
5 rules of you can't answer with an "uh-huh"
6 or "uh-uh." You have to answer yes or no.
7 Similar with nodding, and we can't talk
8 over each other because it just makes it
9 hard for the court reporter.

10 Also, if you need to take a break
11 at any time, just let me know. You are
12 free to do it. The only thing would ask is
13 that if I ask a question, you answer the
14 question, then we take a break; is that
15 fair?

16 A. Yes.

17 Q. Okay. Also, there are probably
18 several times today I will ask questions
19 that are just either seem confusing or, you
20 know, don't make sense in the context of
21 your training and background. It is not my
22 intention to do that. It's just something
23 that may happen. If you get a question
24 that you don't understand or is in any way
25 confusing, will you just let me know, and I

Michael C. Herron, Ph.D. - February 26, 2020

7

1 will try to rephrase it?

2 A. Yes.

3 Q. Okay. What did you do to prepare
4 for today's deposition, if anything?

5 A. I read my report. I reviewed the
6 complaint. I looked through some of the
7 computer code that I wrote for the report.
8 I met with some attorneys yesterday, and I
9 looked through -- I think, actually, I
10 covered the documents I looked through.

11 Q. Okay. And you are being
12 compensated \$400 an hour for this case; is
13 that correct?

14 A. Yes.

15 Q. And how long did it take you to
16 prepare the expert report?

17 A. Are you asking me the number of
18 hours?

19 Q. Yes, sir.

20 A. I don't know the number off the
21 top of my head.

22 Q. Okay. Do you know generally?

23 A. I am not sure I could estimate
24 that accurately.

25 Q. That's fair. You had someone

Michael C. Herron, Ph.D. - February 26, 2020

8

1 assist you to analyze data or prepare the
2 report; is that correct?

3 A. No.

4 Q. Okay. Did somebody not go and do
5 the GIS data to try to find addresses? I
6 thought I read that on the report.

7 A. Yes.

8 Q. Okay. And who is that person?

9 A. Brian Amos.

10 Q. Is that a student at Dartmouth?

11 A. No.

12 Q. Who is Brian Amos?

13 A. He is a professor at I believe
14 somewhere in Utah. I have worked with him
15 before. I don't know exactly what his
16 position is right now.

17 Q. Understood.

18 When did you start preparing the
19 report, do you recall?

20 A. I have been involved with this
21 case for a number of months. I am not sure
22 I could put an exact date on when I started
23 on this report.

24 Q. Okay. Who first contacted you
25 about this case?

Michael C. Herron, Ph.D. - February 26, 2020

9

1 A. I believe it was an attorney
2 named Sarah Dowd.

3 Q. And do you know if you were
4 contacted before the amended complaint was
5 filed or after?

6 A. Could you tell me the date of the
7 amended complaint, please?

8 Q. Sure. It's roughly, I believe it
9 was certainly the first quarter of 2019,
10 maybe -- I can't recall if it was February
11 or March.

12 A. In that case, I was contacted, I
13 believe, in November of 2018.

14 Q. Okay.

15 A. Possibly December. I don't
16 remember exactly, but that would be before
17 the date that you just mentioned.

18 Q. Okay. And that's, I believe,
19 around the time the original complaint was
20 filed, not the amended, so that makes
21 sense.

22 At the time that you were
23 contacted, what were you asked to examine
24 for the lawsuit?

25 MR. CREELAN: Can I just

Michael C. Herron, Ph.D. - February 26, 2020

10

1 interject? Of course you are entitled
2 to ask about the facts or data or
3 information supplied by counsel, but
4 just I want to caution in your response
5 not to disclose communications, other
6 communications with counsel who are,
7 you know, involved in your work for
8 this case.

9 THE WITNESS: Could you restate
10 the question, please?

11 (Record read.)

12 THE WITNESS: Are you asking me
13 about what the attorneys asked me to
14 do?

15 BY MR. BELINFANTE:

16 Q. Yes. What were the topics that
17 you were asked to examine?

18 A. And is that not privileged?

19 MR. CREELAN: Let me -- I think
20 the struggle here is the question is a
21 little unclear.

22 You shouldn't disclose the
23 communications with counsel. You can,
24 however, I think, describe in -- the
25 areas in which you were asked to look

1 at for the purpose of preparing the
2 report.

3 MR. BELINFANTE: That's fair,
4 that characterization.

5 MR. CREELAN: I think also if it
6 helps just in general for you, Josh,
7 and also for the witness, if it helps
8 to reference your report, you can do
9 that.

10 THE WITNESS: So to the best of
11 my recollection, because I am trying to
12 remember now what I was asked to do
13 probably in November, December, 2018.

14 Q. Uh-huh?

15 A. I believe I was asked to look at
16 data on individuals who have been removed
17 from the voter rolls. I was asked to look
18 at some data, I am confident, on polling
19 place closures. It's possible I was asked
20 about a third subject, but I cannot
21 remember.

22 Q. Okay. You indicated you had read
23 the amended complaint in this case,
24 correct?

25 A. Yes.

Michael C. Herron, Ph.D. - February 26, 2020

12

1 Q. Okay. And in your words, can you
2 tell me what you believe the lawsuit is
3 about?

4 A. Well, my report doesn't really
5 engage that sort of question.

6 Q. Understood. I am just curious.
7 I mean, can you tell me what you think the
8 lawsuit is about, having read the amended
9 complaint independently of your expert
10 report?

11 A. Well, recognizing that I don't
12 have any expertise in legal matters, I
13 think what you are asking me to discuss, I
14 would describe the report as has to do with
15 voting rights in Georgia.

16 Q. Have you read, other than the
17 amended complaint, any of the pleadings in
18 the lawsuit?

19 A. No.

20 Q. Okay. Have you read any
21 depositions taken for this lawsuit?

22 A. No.

23 Q. And other than plaintiff's
24 counsel, have you spoken to anyone in
25 Georgia to complete the work in your

Regency-Brentano, Inc.

Michael C. Herron, Ph.D. - February 26, 2020

13

1 report?

2 A. No.

3 MR. BELINFANTE: Okay. Go ahead
4 and mark this as Exhibit 1, which I
5 will represent to you is a copy of your
6 report.

7 THE WITNESS: Thank you.

8 (Exhibit 1, expert report, marked
9 for Identification.)

10 Q. If you could look at Footnote 11
11 in your report, on page 18. My question
12 is: Do you recall when you received that
13 file that is referenced in Footnote 11?

14 A. I don't know the exact date that
15 received the file noted in Footnote 11. I
16 believe it was in the last month. It is
17 possible it was in the last six weeks. I
18 am not entirely sure.

19 Q. Okay. And if you could then turn
20 to page 25, there is a Footnote 21 there as
21 well; and my question is the same: Do you
22 recall when you received that file?

23 A. I don't know the exact date. It
24 may have been mid February. Just a second.
25 I am trying to reconstruct some dates in my

Michael C. Herron, Ph.D. - February 26, 2020

14

1 head.

2 Q. Sure.

3 A. I would believe around
4 February 13th or 14th.

5 Q. Okay.

6 A. But I am not a hundred percent
7 sure about that.

8 MR. BELINFANTE: Okay. Let me go
9 ahead and show you what we will mark as
10 Exhibit 2.

11 (Exhibit 2, initial disclosures,
12 marked for Identification.)

13 THE WITNESS: Thank you.

14 Q. Which are the initial disclosures
15 in this case. I presume based on your
16 prior answer you have not even seen this
17 document before; is that accurate?

18 A. It is possible. I don't have any
19 recollection of reading this.

20 Q. Okay. Could you turn to page 3?
21 And I will represent to you what this
22 document is where the plaintiffs identify
23 potential experts and let us know generally
24 what they are going to testify about. You
25 are identified in paragraph 4.

Michael C. Herron, Ph.D. - February 26, 2020

15

1 And my question is: It says
2 there in the last sentence, "Dr. Herron is
3 expected to testify on changes in Georgia's
4 precincts during recent elections,
5 including in advance of the 2018 general
6 election, and the use and effect of the
7 'Use-It-Or-Lose-It' statute," and then
8 cites the code section of Georgia; do you
9 see that?

10 A. I am going to read this paragraph
11 if you don't mind.

12 Q. Take your time.

13 A. I have read the material now.

14 Q. Okay. Your expert report does
15 not opine at all on what's referred to in
16 this paragraph as the "Use-It-Or-Lose-It"
17 statute; isn't that correct?

18 A. That is correct.

19 Q. Okay. And did you make the
20 decision -- did you actually analyze any
21 data for purposes of looking at the use and
22 effect of the so-called "Use-It-Or-Lose-It"
23 statute?

24 A. I think I mentioned that I
25 believe in November of 2018 or December, I

1 looked at some data on that matter on this
2 statute as you are describing it. Over the
3 course of the past year, I believe I may
4 have, too.

5 Q. And did you actually study the
6 use and effect of the "Use-It-Or-Lose-It"
7 statute?

8 A. What do you mean by "study"?

9 Q. Did you analyze any data on the
10 use and effect of the "Use-It-Or-Lose-It"
11 statute?

12 A. Well, I think, as I said, I
13 believe I did -- I looked at some data on
14 that in November and December,
15 approximately -- these are approximate
16 months -- 2018, and then I may have also
17 over the course of the next year.

18 Q. Okay. I'm not asking for the
19 content of any communication you may have
20 had with plaintiff's counsel, but did you,
21 in fact, discuss -- or let me ask you this:
22 Did you reach any conclusions about the use
23 and effect of the Use-It-Or-Lose-It
24 statute?

25 MR. CREELAN: I am going to

Michael C. Herron, Ph.D. - February 26, 2020

17

1 object to the relevancy of the
2 question.

3 THE WITNESS: I cannot recall
4 what I may have concluded in November
5 or December of 2018.

6 Q. Okay.

7 A. Beyond that, I mean, I don't
8 discuss this in my report, and I -- I'm
9 hesitant to try and reconstruct what I
10 might have done and not written about in
11 the -- for this report over a number of
12 months.

13 Q. And just -- and it may be that it
14 doesn't matter, but I want to be clear on
15 what my question is. I am not asking what
16 your potential -- even if you reached the
17 conclusions or findings are on the
18 "Use-It-Or-Lose-It" statute. I just wanted
19 to know if you recall reaching any findings
20 or conclusions about the use and effect of
21 the so-called "Use-It-Or-Lose-It" statute?

22 MR. CREELAN: Same objection.

23 THE WITNESS: I recall that I had
24 some data, so I am confident that I
25 looked at the data.

1 Did I reach any findings that I
2 would say put in -- I would consider a
3 finding in the sense of an affidavit
4 like I have written? No.

5 Q. Okay.

6 A. I don't believe so.

7 Q. Okay. And did you, personally,
8 choose not to continue to examine the use
9 and effect of the Use-It-Or-Lose-It
10 statute? Is that a decision you made or
11 were you asked not to?

12 MR. CREELAN: Objection. Again,
13 just to clarify, I don't think
14 Mr. Belinfante is asking for disclosure
15 of any communications with counsel. He
16 is just asking for your internal
17 decisionmaking.

18 Q. Why don't we strike the last part
19 of my question, and I will just ask it this
20 way: Did you, personally, decide not to
21 continue looking at the use and effect of
22 the Use-It-Or-Lose-It statute as it's
23 defined in the plaintiff's initial expert
24 disclosures?

25 A. What do you mean by "personally

Michael C. Herron, Ph.D. - February 26, 2020

19

1 decide"?

2 Q. Did you without -- did you come
3 to a conclusion on your own without
4 instruction to not examine that aspect or
5 that -- use and effect of that statute
6 anymore?

7 MR. CREELAN: You know, I am -- I
8 want to give you a lot of leeway here,
9 but I am going to object here because I
10 don't think that he can meaningfully
11 answer the question without disclosing,
12 either through omission or comission,
13 communications with counsel, and it
14 strikes me that for that reason it's
15 not a line of questioning that is
16 appropriate.

17 MR. BELINFANTE: I can move on.

18 Q. Attached to your report is your
19 curriculum vitae, correct? If you look at
20 the page numbers on the top, it starts on
21 page 92.

22 Is this still an accurate
23 curriculum vitae? Are there any additions
24 that have occurred since it was provided to
25 us?

Michael C. Herron, Ph.D. - February 26, 2020

20

1 A. I would like to note that it
2 starts on page 77 according my document
3 here.

4 Q. Okay.

5 MR. CREELAN: I think you have
6 different --

7 MR. BELINFANTE: I may have
8 pulled a different one, then. What
9 document do you have, by the way?

10 MR. CREELAN: This is Exhibit 1.
11 It's his -- Dr. Herron's report.

12 MR. BELINFANTE: Yes.

13 MR. CREELAN: But the pagination
14 that's on the top I believe is from the
15 Pacer system.

16 MR. BELINFANTE: That's what I
17 was looking at. What document does it
18 say?

19 MR. CREELAN: I'm sorry. Oh,
20 Document 241.

21 MR. BELINFANTE: That's why. I
22 have a document -- I think this may
23 have been one that was attached to --
24 that's fine. Let me just back up then.

25 Q. In looking at your C.V., are

Michael C. Herron, Ph.D. - February 26, 2020

21

1 there any additions that are material? You
2 are still teaching at Dartmouth? You have
3 a 9:00 class tomorrow I see.

4 A. 9:05.

5 Q. Okay.

6 A. I would not say that there are
7 any additions to the material. It is
8 possible that one of my committee
9 assignments, which I would not consider
10 material, is changed.

11 Q. Okay. That's fair.

12 And what would you say is your
13 principal field of academic interest?

14 A. Statistical analysis of election
15 administration.

16 Q. Okay. And prior to this report
17 that you prepared for this lawsuit, had you
18 specifically studied Georgia elections?

19 A. I don't have any papers, to the
20 best of my recollection, that analyze
21 Georgia specifically, but I have papers
22 that engage election administration more
23 generally, of which Georgia is a part.

24 Q. Okay. But do you recall
25 analyzing data for any other papers -- I

Michael C. Herron, Ph.D. - February 26, 2020

22

1 understand you haven't written a paper on
2 Georgia -- but in looking at election
3 administration generally, do you recall
4 having looked at data or processes in
5 Georgia?

6 A. When I have data that covers the
7 United States, which I have for some of my
8 projects, then Georgia is included in that.

9 Q. Okay. How many courses are you
10 currently teaching this semester?

11 A. Dartmouth is on quarters.

12 Q. Okay. That's right.

13 A. I am teaching two sections of one
14 course.

15 Q. What's that course?

16 A. Game theory.

17 Q. If you could turn in your report,
18 and I will use the paginations on the
19 bottom, page 14, paragraph 22. I read
20 that, and I guess my question is: Have you
21 published an article examining the impact
22 of moving polling locations prior to
23 drafting this report?

24 A. No. I have not written on that
25 specific subject.

1 Q. Okay. And you have testified,
2 you identified two cases -- I am sorry --
3 three cases, in paragraph 24 where you have
4 testified as an expert witness; do you see
5 that?

6 A. I see that.

7 Q. Okay. The Veasey case was about
8 voter identification; is that right? The
9 Texas case?

10 A. That is correct. That would be
11 my interpretation.

12 Q. And the League of Women Voters of
13 New Hampshire versus Gardner, do you recall
14 what that case was about?

15 A. Yes, I do.

16 Q. And what was it about?

17 A. It was about a particular
18 election law in the state of New Hampshire.

19 Q. Was it a voter registration law?

20 A. I would describe it as a case
21 that involved -- Senate Bill 3 was the name
22 of the law, and among other things, that
23 engaged the voter registration system in
24 New Hampshire.

25 Q. Okay. Was anything in the League

1 of Women Voters case about the closing,
2 consolidating or moving of poll locations?

3 A. No.

4 Q. Okay. And what was the Jennings
5 versus Elections Canvassing Commission of
6 Florida case from the Florida Circuit
7 Court?

8 A. This was a case about whether a
9 particular -- whether the undervote rate,
10 that's the rate of individuals not voting
11 in a particular election, is -- which was
12 high in Christine Jennings' congressional
13 race. I believe it was the 13th
14 congressional district. I could be
15 mistaken, whether that elevated under- vote
16 rate reflected problems with voting
17 machines or whether it reflected a
18 particular display of a ballot, the way a
19 ballot looked on a screen.

20 Q. Okay. So the closing,
21 consolidating or moving of poll locations
22 was not an issue in the Jennings case, at
23 least as it relates to your testimony; is
24 that correct?

25 A. That is correct.

1 Q. Let me ask you a couple of
2 questions about things that your report
3 does not opine on.

4 It does not opine on why a local
5 government could change a polling location;
6 is that correct?

7 A. It is correct that my report
8 doesn't take a position on why any
9 government, local or state or otherwise,
10 could take a -- could choose to close a
11 polling place.

12 Q. Okay. And does your report reach
13 a conclusion or offer an opinion on whether
14 the state of Georgia government or whether
15 local governments in Georgia make the
16 decisions to move polling locations?

17 A. My report doesn't engage the
18 matter of what governmental bodies chose to
19 close any particular polling places.

20 Q. Let me ask you to turn to
21 paragraph 16 in your report, which starts
22 on page 10, and I will just ask you to read
23 that real quick.

24 A. To clarify, paragraph 16?

25 Q. Yes. On page 10.

Michael C. Herron, Ph.D. - February 26, 2020

26

1 MR. CREELAN: Bottom of page 10.

2 THE WITNESS: Thank you.

3 Q. Have you read it?

4 A. I have.

5 Q. Okay. There -- and you discuss
6 reprecincting, which you define in
7 paragraph 15 as, "Changes either in
8 precinct boundaries or polling places." Do
9 you see that definition there?

10 A. Yes.

11 Q. Okay. As I read paragraph 16, it
12 discusses that Georgia counties engaged in
13 reprecincting. I don't see anywhere in the
14 opinion where it suggests that Georgia
15 state government engaged in reprecincting;
16 is that accurate?

17 THE WITNESS: Could you please
18 restate the question?

19 (Record read.)

20 MR. CREELAN: I object to the
21 form.

22 MR. BELINFANTE: You can answer
23 if you can.

24 THE WITNESS: I am sorry. I am
25 not totally sure what you're asking me.

1 Q. Sure. Would you agree with me
2 that paragraph 16 suggests or states that
3 counties, county governments, engaged in
4 reprecincting between 2014 and 2018?

5 A. I don't see the word "county
6 government" in this paragraph, so I would
7 not agree that this paragraph says anything
8 necessarily about county governments.

9 Q. Okay. So when you say, "Numerous
10 counties in Georgia engaged in
11 reprecincting," what does that mean?

12 Or let me ask this way: Who
13 engages in the reprecincting?

14 A. I don't -- this report doesn't
15 take a position on who engaged in the
16 reprecincting that I describe in this
17 report.

18 Q. Okay. It does not take a
19 position on whether there is any
20 intentional discrimination by the state
21 government of Georgia; is that correct?

22 A. That is correct. The report
23 doesn't engage the matter of intent.

24 Q. Okay. And that would be true for
25 county governments as well; is that

1 correct?

2 A. I am sorry. I don't understand
3 the question.

4 Q. When you say that the report
5 doesn't engage in the question of intent, I
6 had asked about the state government. I am
7 just making sure that also your report does
8 not take an opinion or offer an opinion on
9 the intent of county governments with
10 regard to reprecincting; is that correct?

11 A. Yes.

12 Q. Okay. And your report does not
13 offer an opinion on whether the State has
14 any knowledge of an alleged disparate
15 impact caused by reprecincting; is that
16 correct?

17 A. I would say that my report
18 doesn't take a position on what state
19 election officials may or may not have
20 known about reprecincting. I don't take a
21 position on this.

22 Q. And you don't take a position on
23 what county governments may or may not have
24 known about reprecincting; is that fair as
25 well?

1 A. I don't want to -- I think the
2 latter question is difficult for me to
3 answer. I don't want to be in a situation
4 where I am saying that individuals don't
5 know where precincts are located.

6 Q. Fair. And that's not what I am
7 asking, and I will try to do a better job
8 asking the question.

9 Your report does not take an
10 opinion on whether any county governments
11 know or knew of any alleged disparate
12 impact on African-American voters between
13 2014 and 2018 as it relates to
14 reprecincting decisions; is that correct?

15 THE WITNESS: Could you read
16 that?

17 (Record read.)

18 THE WITNESS: My report does not
19 take a position on what any county
20 official may or may not have known.

21 Q. Okay. There's several terms I am
22 going to ask you to just help me define.
23 Your report talks about or uses the phrase
24 "racially neutral." What does that term
25 mean to you as it relates to the

1 information provided in your report?

2 A. The way I use the term in this
3 report was -- excuse me -- let me start
4 again.

5 The way I use the term in the
6 report was to indicate that a set of
7 polling place changes would be racially
8 neutral if it affected different racial
9 groups in the state of Georgia equally.

10 Q. And how equal does something have
11 to be, as you are using that term, in order
12 to be racially neutral? I am just trying
13 to quantify if that makes sense.

14 A. Ultimately, I think that's a
15 question that's in front of the Court, and
16 my report doesn't take a position on how
17 non-neutral a particular set of polling
18 place changes has to be before that -- that
19 set is legally problematic. I am not
20 taking a position on that.

21 In my case I am looking for
22 consistency across different approaches to
23 the studying of polling place changes, and
24 I am looking to see -- I use the term --
25 excuse me. I'm not sure where we are

Michael C. Herron, Ph.D. - February 26, 2020

31

1 going. I apologize.

2 Q. Okay. All right.

3 I'm not asking your opinion on
4 what's legally racially neutral versus a
5 potential disparate impact.

6 From a statistical analysis
7 perspective, is there any difference that
8 could -- could you have a situation where
9 decisions impact Blacks and Whites
10 differently, but it would still be deemed,
11 from a statistical analytical perspective,
12 racially neutral?

13 MR. CREELAN: Objection as to
14 form.

15 THE WITNESS: Hypothetically, I
16 think the answer is yes.

17 Q. Okay. And where would you draw
18 that line?

19 A. I think it depends on how I am
20 carrying out an analysis.

21 Q. Okay. What factors would you
22 look at to determine whether something is
23 racially neutral?

24 A. Can you clarify the scope of that
25 question?

1 Q. Well, I mean, your report
2 concludes that polling location changes in
3 Georgia were not racially neutral, correct?

4 A. Yes. That is correct. I don't
5 know exactly where you are talking about in
6 the document, but I accept that.

7 Q. Okay. So what I am trying to
8 figure out is, does -- is there any -- is
9 there any amount in which polling locations
10 could affect the white population and a
11 black population, for example, differently,
12 but still be deemed racially neutral from a
13 statistical, analytical perspective?

14 MR. CREELAN: Objection as to
15 form.

16 THE WITNESS: Could you reread
17 the question, please?

18 (Record read.)

19 THE WITNESS: Could you clarify
20 what you mean by "differently"?

21 Q. Well, I guess that's the heart of
22 the question I am getting to is: Let's say
23 something impacts the White population by
24 .00005 percent. Is that something that
25 could still be -- and on a comparative

1 basis -- is that something that could still
2 be racially neutral even though there is a
3 difference?

4 So what I am trying to determine
5 is: Does racially neutral have to be
6 always a one-to-one or can there be
7 differences in how it impacts populations?

8 MR. CREELAN: Objection as to
9 form.

10 THE WITNESS: I think ultimately
11 I see that question as in front -- one
12 of the questions in front of the Court.

13 Q. Okay. So is there no statistical
14 basis to determine when something is
15 racially neutral versus when something
16 causes a disparate impact or
17 disproportionate effect as you opine in
18 your report?

19 MR. CREELAN: Objection as to
20 form.

21 THE WITNESS: I am sorry. Could
22 you please read me the question?

23 (Record read.)

24 THE WITNESS: I think there is a
25 statistical basis, and my report offers

1 data that speaks to racial neutrality.

2 Q. Okay. And my question is, and it
3 can a hypothetical: At what point does
4 something cross the line from being
5 racially neutral to having a
6 disproportionate effect? Is there a
7 number, a bright line? Two percent, five
8 percent, something that causes it to shift
9 from being classified by you as racially
10 neutral or having a disproportionate
11 effect?

12 MR. CREELAN: Objection as to
13 form.

14 THE WITNESS: I would say that --
15 to go back to what I said earlier, that
16 ultimately that's a question in front
17 of the Court.

18 With respect to what I did, that
19 general result reflects the fact that
20 the different approaches I brought to
21 this question of who, which racial
22 groups were more or less affected by
23 polling place closures had consistent
24 results.

25 Q. Doesn't really answer the

Michael C. Herron, Ph.D. - February 26, 2020

35

1 question, and I am not asking for you to
2 opine on any legal conclusion; but your
3 report reaches a conclusion that polling
4 closures in Georgia dis-
5 proportionately affected the black
6 population, correct?

7 A. Without reference to a particular
8 location in the report.

9 Q. And so at what point on a numeric
10 scale does something go from being racially
11 neutral to having a disproportionate
12 effect, as you concluded?

13 MR. CREELAN: Objection as to
14 form.

15 THE WITNESS: In this case, and
16 for the purposes of this report, I
17 counted, using data that was supplied
18 to me, individuals in Georgia who had
19 polling place changes. I will use the
20 word "changes" generally because I --
21 there are couple different approaches
22 to that in the affidavit.

23 Given that I was counting these
24 individuals, I can assess whether the
25 fraction of -- I can assess with

1 different racial groups the rates at
2 which individuals received new polling
3 places. Again, with the caveat that I
4 am using new polling places in a
5 general way in answering this question.

6 What I just described, and what
7 my report discusses, are literally
8 counting exercises. So if my report
9 finds, based on these counting
10 exercises, that the rate at which
11 African-American registered voters in
12 Georgia received new polling places --
13 again, with a caveat of what the new
14 polling places means -- compared to the
15 White rate -- and I should note that
16 these rates are simply based on
17 counting names or individuals. It's
18 not an estimation exercise. If the
19 rate of new -- of receiving a new
20 polling place is greater for
21 African-Americans than it is for
22 Whites, then it follows that
23 African-Americans were
24 disproportionately affected.

25 Q. How much greater does that rate

1 have to be in order for African-Americans
2 to be disproportionately affected?

3 A. In this particular counting
4 exercise where -- because I have voter file
5 data, I can literally count the number of
6 individuals as opposed to estimate features
7 of them, in principle, it has to be
8 greater.

9 Q. Would one black voter with a
10 different polling location indicate that
11 something is disproportionately affected?

12 A. Technically, yes.

13 Q. Page 11 of your report,
14 paragraph 17, you cite the Brady and
15 McNulty report are studied, and the Amos,
16 Smith and St. Claire's study of 2017, and
17 you then say, "This finding implies that
18 reprecincting procedures are not
19 necessarily politically neutral."

20 Do you see that?

21 A. I see that.

22 Q. What do you mean by "politically
23 neutral"?

24 A. I mean that these papers show
25 that individuals who were reprecincted --

1 and I am using that term in the general
2 sense, as we have discussed -- have lower
3 turnout rates in elections because
4 elections are mechanisms that people use to
5 register their preferences. If certain
6 individuals are in a particular group, like
7 here I mentioned racial or partisan group,
8 but those are only examples, are more
9 likely than individuals in another group to
10 be reprecincted, then it follows from those
11 papers that those individuals are less
12 likely to turn out to vote; and if they
13 don't turn out to vote, they can't register
14 their preferences in an election, and
15 therefore, since elections end, in
16 principle, in identifying a winner of some
17 contest between two opposing candidates or
18 multiple opposing candidates, individuals
19 who stay home are -- don't have a political
20 voice, and I would refer to that as not
21 being politically neutral.

22 Q. Let me ask you one more term and
23 just what you mean by it. On page 24 of
24 your report there is a Footnote 18. It
25 says, "Table 1 does not report confidence

1 intervals for the percentages in it."

2 What is a confidence interval? I
3 truly don't know. There is no trick here.

4 A. If in a statistical exercise an
5 individual like me or anyone else for that,
6 hypothetically, has a sample of
7 individuals, a sample of observations from
8 a broader group, a population, then because
9 one only has -- in this hypothetical
10 situation, one only has a sample, that
11 there is uncertainty in estimates or
12 calculations based on the sample, and so
13 that uncertainty is captured with this
14 notion of a confidence interval.

15 Q. Okay. Is that -- is a confidence
16 interval something that's quantified like a
17 standard deviation or is it more -- I will
18 leave it that way. Is a confidence
19 interval something that is a number, a
20 quotient, or is it more valuing? I'll --
21 that's my question.

22 A. It's an interval.

23 Q. Okay.

24 A. Two numbers.

25 Q. Okay. I got it. All right.

Michael C. Herron, Ph.D. - February 26, 2020

40

1 Thank you.

2 Let's talk generally about some
3 presumptions that are in your report.

4 If someone appears on the voter
5 file roll or the voter roll -- I may use
6 those terms interchangeably; is that fair?

7 A. I'm sorry. I am not sure what
8 you are asking me.

9 Q. Okay. I may interchangeably
10 refer to the data you have for 2018 as a
11 "voter file" or a "voter roll." I just
12 want you to understand that that's the term
13 as I am going to use it.

14 And so my question is: If
15 somebody appears on the voter file for 2018
16 that you examined, you are presuming that
17 that person remains an eligible Georgia
18 voter; is that correct?

19 MR. CREELAN: Objection as to
20 form.

21 THE WITNESS: Could you clarify
22 what you mean by "remains"?

23 Q. Sure. All right. So let's take
24 me. I am on the voter file roll for 2018.
25 You are -- in your report you presume that

Michael C. Herron, Ph.D. - February 26, 2020

41

1 Josh Belinfante still resides in the state
2 of Georgia and can vote in the 2018
3 election; is that correct?

4 MR. CREELAN: Objection as to
5 form.

6 THE WITNESS: I am confused
7 because you are using -- you said can
8 vote, but the 2018 election is over. I
9 don't understand.

10 Q. Okay. So let's say -- you would
11 agree with me that somebody could be on the
12 voter file for 2018 that you examined but
13 may have died in 2017. Would you agree
14 with that?

15 A. Yes. It is possible.

16 Q. Okay. So the presumption that
17 goes into the report is that anyone who is
18 listed on the 2018 voter file was eligible
19 to vote in the 2018 election; is that a--

20 MR. CREELAN: Objection --

21 MR. BELINFANTE: -- accurate?

22 MR. CREELAN: -- to the form.

23 THE WITNESS: Yes.

24 Q. Okay. Did you engage in any kind
25 of analysis or test to determine what

1 percentage of persons who were on the voter
2 file in 2018 were eligible to vote in the
3 2018 election? And by that I mean, they
4 could have moved, they could have died.
5 Was there any kind of control you looked at
6 or is it just presumed if they are on the
7 2018 voter file, they are eligible to vote
8 in that 2018 election?

9 MR. CREELAN: Objection as to
10 form.

11 THE WITNESS: The 2018 voter file
12 I received from the State -- well,
13 excuse me. I received it through --
14 from plaintiffs' counsel --

15 MR. BELINFANTE: Sure.

16 THE WITNESS: -- through
17 discovery.

18 Q. Right.

19 A. It's my understanding that this
20 is the official state and official state
21 database that lists eligible voters as of
22 the date of the creation of that file.

23 Q. Okay.

24 A. So I used the State's data to
25 study individuals who voted in 2018. If

1 the State says someone was an eligible
2 voter at that moment, then I rely on the
3 State's judgment.

4 Q. Do you know with what frequency
5 the State -- never mind. Withdrawn.

6 Let's look at paragraph 17,
7 again, on page 11 of your report. You cite
8 there a Brady and McNulty article from
9 2011. I am going to hand you what I
10 believe is the article, and we will label
11 it Exhibit 3.

12 (Exhibit 3, Brady and McNulty
13 article from 2011, marked for
14 Identification.)

15 Q. Is this the article that is
16 referred to in your report?

17 A. I believe it is, yes.

18 Q. And forgive me, for some of the
19 questions I ask are for the purpose of
20 preserving the record. I am not trying to
21 insult the work you have done by any
22 stretch.

23 But did you read the Brady
24 McNulty report prior to citing it here in
25 this report?

Michael C. Herron, Ph.D. - February 26, 2020

44

1 A. Yes.

2 Q. Okay. That's the kind of
3 question I am talking about.

4 Would you agree with me that the
5 Brady and McNulty report looks at the 2003
6 gubernatorial recall election in Los
7 Angeles County?

8 A. It does.

9 Q. And that's the only election it
10 really examines; isn't that correct?

11 A. I believe that is correct, yes.

12 Q. And on page 116 of that report,
13 and I guess I should have -- I should go
14 back. It starts on page 115. The last
15 paragraph reads, "The historic California
16 2003 gubernatorial recall election provided
17 an opportunity to study how voting costs
18 affect voter turnouts. In what amounts to
19 a natural experiment, some counties -- in
20 order to cut administrative costs --
21 consolidated voting precincts and changed
22 polling locations in ways that nearly
23 randomly assigned increased voting costs to
24 some voters but not others." Do you see
25 that?

1 A. No. I am sorry. I am not sure
2 where you are reading. I apologize.

3 Q. Sure. I started reading the last
4 paragraph on page 115. My question is
5 about 116, but to put it in context
6 starting with "The historic," and I read
7 through "but not others."

8 A. I see where I believe you read.

9 Q. Yes. Okay. McNulty and Brady
10 conclude that counties made decisions, as
11 they say here, in order to cut
12 administrative costs.

13 Would you agree with that?

14 A. I agree that that's what they
15 said. Is that what you are asking me?

16 Q. Yes.

17 A. Could you point to where you mean
18 this in the document, please?

19 Q. Sure. Yes. It's the second line
20 on page 116. Is where you said -- I am
21 sorry. It starts on the first line, "In
22 order to cut administrative costs," it's in
23 between the two dashes.

24 A. I see the passage, yes.

25 Q. Okay. Is it your understanding

1 that Brady and McNulty conclude that
2 California counties made voting precinct
3 changes in order to cut administrative
4 costs?

5 A. Well, that is what they said,
6 yes.

7 Q. Okay. And if you look at
8 page 117 of the article, in the last
9 paragraph on the left-hand column, it says,
10 "In the 2002 Governor's race in Los Angeles
11 County, 55.1 percent of those registered
12 did not vote, about 35.8 percent voted at
13 the polling place, and 9.1 percent voted
14 absentee, indicating that there were many
15 voters in all three groups." Do you see
16 that?

17 A. I see that sentence, yes.

18 Q. Okay. Would you agree with me
19 that in between the -- in 2014 and in 2018,
20 the Georgia absentee voter percentage was
21 significantly higher than 9.1 percent?

22 A. I don't have the figures in -- on
23 the top of my head, but I am confident that
24 it is greater than 9.1 percent.

25 Q. Let me ask you to look. I

Michael C. Herron, Ph.D. - February 26, 2020

47

1 probably should have done this before. On
2 page 8, looks like paragraph 10 is where it
3 looks like there is a breakdown of those
4 numbers.

5 MR. CREELAN: For the clarity of
6 the record, you are referring to
7 Exhibit 1, Dr. Herron's report?

8 MR. BELINFANTE: Yes.

9 MR. CREELAN: Page 8?

10 MR. BELINFANTE: Thank you.

11 THE WITNESS: I am sorry. What
12 is the question?

13 Q. I just wanted to refer you to
14 where you referred to the in-person voting
15 rates in Georgia versus other forms of
16 voting because you said you couldn't recall
17 off the top of your head. I was truly just
18 trying to refresh your recollection as to
19 what you meant.

20 And so my question is: As it
21 relates to the study of the effect of
22 moving polling locations, does the rate at
23 which Georgia voters vote either early, by
24 mail, or something other than on an
25 election day, how do those rates impact

1 your analysis if at all?

2 A. I would say that the way that
3 voters cast ballots and whether they turned
4 out to vote, that's in my -- those are in
5 my data. So since I measure or count
6 individuals who turned out to vote, and in
7 some cases how they turned out to vote, I
8 would say that how they turned out to vote
9 impacts the analysis because it's
10 incorporated in the data.

11 Q. Okay. Your data doesn't examine
12 early voting, and I will use that term
13 generally. It could be in-person early
14 voting. It could be vote by mail. Your
15 report does not examine whether White
16 voters or any other ethnic group or race
17 votes more proportionally early or
18 proportionally in person; is that correct?

19 MR. CREELAN: Objection as to
20 form.

21 THE WITNESS: I would not say
22 it's completely correct because when I
23 am describing in my report in
24 Section 5.4 starting on page 68 --

25 Q. Okay.

1 A. -- I describe turnout rates.

2 Q. Right.

3 A. So implicit in turnout rates are
4 different methods of voting. So I would
5 not say that I don't include that. One can
6 turn out in Georgia, as you just indicated,
7 in a variety of ways.

8 Q. Okay. Got it. Let me ask you to
9 look back at Exhibit 3, which is the
10 McNulty and Brady or Brady-McNulty report
11 on page 119, and I just ask you to read the
12 paragraph -- it's the first full paragraph
13 beginning with the word "moreover" and
14 ending with the word "distance."

15 A. Yes.

16 Q. Okay. My question is -- and I
17 will try to describe what I understand them
18 to say -- is that when they looked at
19 persons who had their polling places
20 changed in 2003, the difference, on
21 average, was, as I read it, .034 miles or
22 about 60 yards. Am I reading that
23 correctly?

24 A. That -- I see those figures, yes.

25 Q. Okay. And they conclude that

1 60 yards is highly statistically
2 significant. Would you agree with that?

3 A. That is my understanding of their
4 result, yes.

5 Q. Okay. Did you conduct an
6 analysis of how far polling locations may
7 have moved in Georgia?

8 A. It is not part of my report. I
9 looked briefly at some data, but not
10 thoroughly.

11 Q. Okay. Would you agree that the
12 effect of a polling location moving
13 60 yards is statistically significant?

14 MR. CREELAN: Objection as to
15 form.

16 Q. I will withdraw. I think that's
17 more about their study. Not a good
18 question.

19 Let me ask you to turn to
20 page 126 of the report, the McNulty-Brady
21 report. The first paragraph on the
22 right-handed column beginning with "these
23 results" and ending in "place voting."
24 Could you just read that briefly?

25 A. Excuse me. Could you just

1 clarify which paragraph for me?

2 Q. Sure. It's the first full
3 paragraph on the right column. It begins
4 with "these results" and ends with "place
5 of voting."

6 A. Thank you. I have read the
7 paragraph.

8 Q. Okay. What conclusion do you
9 think, in your words, Brady and McNulty are
10 reaching in that paragraph?

11 MR. CREELAN: Objection as to
12 form.

13 THE WITNESS: I think they are
14 offering an interpretation of their
15 results.

16 Q. And what is that interpretation?

17 A. Let me say this: I think they
18 are -- I don't know if the term
19 "interpretation" or "providing context"
20 or -- is the right way to think about this.
21 I would have to think more carefully.

22 They are explaining here, as in
23 the second sentence, "Changes in polling
24 places and increased distances to polling
25 places changed turnout behavior due to

1 increased inconvenience."

2 That was a quote. That is, I
3 would say, an explanation. The latter half
4 of that sentence is an explanation for the
5 former half.

6 Q. Uh-huh.

7 A. And then they talk about the
8 extent to which people might be habituated.
9 So I would -- maybe I wouldn't call this
10 interpretation. Perhaps providing context.
11 I am not totally sure how I would describe
12 that.

13 Q. Uh-huh. Do you find their
14 statement here to be limited to their study
15 or do you think that it could equally
16 apply -- or let me ask you this: Did you
17 study whether that could equally apply in
18 Georgia?

19 MR. CREELAN: Objection as to
20 form.

21 THE WITNESS: Would you please
22 clarify what "it" is in this context?

23 Q. Sure. They say on page 126 of
24 the report that, "Those people who are
25 habituated to going long distances to their

1 polling place are less affected by
2 increased distances to polling places, and
3 older people (whom we can presume have
4 learned about the voting system) substitute
5 absentee voting for polling place voting."

6 Do you see that?

7 A. I see that.

8 Q. Okay. Your study doesn't look at
9 the first part of that sentence, which is,
10 whether the distance is longer and whether
11 a person is used to driving a fair distance
12 or walking a fair distance to a polling
13 location; isn't that right? Because you
14 don't look at where the polling place
15 change moved to?

16 A. It's not true that my analysis
17 doesn't consider where a polling place is
18 moved to, as the way you described it. And
19 I am a little bit uncomfortable right now
20 because you are talking about what I am
21 saying, but I don't know exactly what --
22 where in my document you are talking about,
23 so I am not totally sure how to answer your
24 question.

25 Q. Well, I guess my question is:

1 You cite Brady and McNulty in paragraph 17
2 on page 11 of your report, which is
3 Exhibit 1. You cite it for the conclusion
4 that registrants who have been reprecincted
5 have lower likelihoods of voting in future
6 elections. You agree with that, correct?

7 A. I agree with that
8 characterization of my report, yes.

9 Q. Okay. And I guess my question
10 is: That Brady and McNulty, in studying
11 one election in California in 2003,
12 conclude that that may be the case for
13 some, but if someone is used to going a
14 long distance, they are less affected by
15 increased distances to polling places.

16 MR. CREELAN: Objection as to
17 form.

18 Q. And so my question is: Does that
19 conclusion, interpretation, statement,
20 however you want to call it, does that line
21 of reasoning also apply to Georgia; that
22 people who are habituated to going long
23 distances to their polling places are less
24 affected by increased distance to polling
25 places?

1 MR. CREELAN: Objection as to
2 form.

3 THE WITNESS: I didn't explore in
4 Section -- excuse me -- 5.4 when I
5 looked at turnout in the 2018 general
6 election, which is where this is
7 relevant, I believe, I didn't explore
8 the role of distance. So, for example,
9 in Table 10, and I report differences
10 in turnout rates --

11 Q. Uh-huh.

12 A. -- they do not incorporate
13 habituation.

14 Q. Okay.

15 A. So I am not sure -- I am still
16 not totally sure how to answer your -- how
17 to answer this question.

18 Q. All right. McNulty and Brady
19 talk about transportation costs and search
20 costs. Are you familiar with those terms?

21 A. Yes, I am.

22 Q. Okay. Just so we are on the same
23 page, what is a search cost in the context
24 of what Brady and McNulty are talking
25 about?

1 A. Could you point to where they use
2 this term in the paper, please?

3 Q. I was afraid you would ask me
4 that. Let's see. On page 116 on the
5 left-hand column, the last full paragraph
6 beginning with "the change," the last
7 sentence talks about increased search costs
8 and travel costs.

9 A. I need to read it. Since you are
10 asking me to evaluate a statement that they
11 wrote, I need to read the material before
12 it.

13 Q. Sure.

14 THE WITNESS: Okay. Would you
15 please read the question that's in
16 front of me?

17 Q. I think my question is -- I am
18 just trying to make sure we are looking at
19 the same page. What do you consider a
20 search cost to be? What does that term
21 mean to you?

22 A. Well, my affidavit doesn't use
23 that term.

24 Q. Uh-huh. Understood.

25 A. So what McNulty and Brady are

1 saying is that they refer to a search cost
2 as the cost of finding and going to a new
3 polling place.

4 Q. Okay. And is it your
5 understanding that a search cost could be
6 encountered if there are new polling
7 locations? In other words, if Fulton
8 County doubles the number of polling
9 locations it has in Fulton County,
10 Georgia --

11 A. Yes.

12 Q. -- then there will be inherent
13 within that increased search costs because
14 a significant number of people are going to
15 have a new polling location. Would you
16 agree with that?

17 MR. CREELAN: Objection as to
18 form.

19 THE WITNESS: Hypothetically,
20 yes.

21 Q. Okay. And counties could want to
22 increase the number of polling locations
23 for a host of completely racially-neutral
24 reasons; isn't that correct?

25 A. I don't want to take a position

1 on what counties may or may not want to do.

2 Q. Okay. Would you agree that --
3 well, let me ask this: Is it your
4 understanding that some literature suggests
5 that having more polling locations cuts
6 down on voting lines?

7 MR. CREELAN: Objection as to
8 form.

9 THE WITNESS: Yes. I would say
10 that's my understanding of the
11 literature. It's not -- literature on
12 voting lines is not extensive.

13 Q. Sure. And if a county, then,
14 were to try to address long lines at
15 polling locations, it could seek to open
16 more polling locations, correct?

17 A. Hypothetically, I suppose.

18 Q. Yes. I am all in hypotheticals
19 right now.

20 And, hypothetically, if they
21 opened more polling locations, you may have
22 across the county increased search costs as
23 voters seek to find the new polling
24 location where they have to vote; isn't
25 that right?

Michael C. Herron, Ph.D. - February 26, 2020

59

1 A. Hypothetically.

2 MR. CREELAN: Objection.

3 Q. And hypothetically, that could
4 lead voters -- or lead to less voter
5 turnout because they have a new polling
6 location; isn't that right?

7 MR. CREELAN: Objection as to
8 form.

9 THE WITNESS: I think the latter
10 question you are asking me is a more
11 general one. If you -- holding all
12 things equal, if search costs were to
13 increase, perhaps you could argue that.
14 However, your question is based on
15 reducing lines. So to answer your
16 question better, I would have to know
17 about the effects on lines as well.

18 Q. Okay. And I guess, then, my
19 question is: Any time the county increases
20 the number of polling locations for
21 whatever reason, there is a possibility of
22 increased search costs and, therefore,
23 lower voter turnout; would you agree with
24 that statement?

25 A. Insofar as it's you mentioned a

1 possibility, I suppose it's a possibility.

2 MR. BELINFANTE: Paragraph 17 of
3 your report, and on page 11, Amos,
4 Smith and St. Claire article from 2017.
5 I will hand you what we will mark as
6 Exhibit 4, which I believe is the
7 article you referred to.

8 (Exhibit 4, Amos, Smith and St.
9 Claire article from 2017, marked for
10 Identification.)

11 Q. It's also on page 86 of your
12 report is the full citation if you wanted
13 to check it.

14 This is the article -- and so you
15 read this article by Amos, Smith and St.
16 Claire before completing your report?

17 A. I have read this article.

18 Q. Okay. And this article was
19 written about only Manatee County, Florida;
20 isn't that right?

21 A. That is correct.

22 Q. And in this article -- I'm sorry
23 -- looks like on page -- they describe
24 generally the election superintendent in
25 Manatee County, Florida and their belief

1 that he was engaged in polling -- changing
2 polling locations for a partisan reason.
3 Is that a fair description of their
4 article?

5 MR. CREELAN: Objection as to
6 form.

7 THE WITNESS: Could you show me
8 where?

9 Q. Sure. Page 142 in the second
10 paragraph, the second full paragraph that
11 begins with "The notion."

12 Okay. My question is: Here they
13 conclude that anecdotal evidence suggests
14 that the reprecincting was conducted in
15 Manatee County, Florida with electoral, if
16 not also partisan, gains in mind."

17 Do you see that? It's about
18 midway through that paragraph.

19 A. Could you please tell me the line
20 number in the paragraph? I just want to
21 make sure I am finding the right thing.

22 Q. Sure. Anecdotal evidence is
23 right under Brady-McNulty. The line is ten
24 is where you see "anecdotal evidence."

25 A. I see the line now. Thank you.

1 Q. Okay. Your report doesn't
2 examine -- let me strike that. Start over.

3 Your report doesn't reach a
4 similar conclusion that reprecincting in
5 Georgia was done with electoral, if not
6 also partisan, gains in mind; is that
7 correct?

8 MR. CREELAN: Objection as to
9 form.

10 THE WITNESS: My report doesn't
11 take a position on the intent of any of
12 the polling place location changes that
13 it documents.

14 Q. Okay. And Amos, Smith and St.
15 Claire look at changes from the 2012
16 election to the 2014 election; would you
17 agree with that?

18 A. I believe that is correct. Yes.

19 Q. 2012 is a presidential election
20 year, and 2014 is not; isn't that right?

21 A. That is correct.

22 Q. Okay. Do you have any concerns
23 with the fact that they compared a
24 presidential election year to a
25 non-presidential election year? And by

1 concerns I mean, does that impact your
2 opinion of this study at all?

3 MR. CREELAN: Objection as to
4 form.

5 THE WITNESS: I would say that it
6 raises challenges for the article.
7 They attempt to control for 2012 voting
8 behavior in Table 2 to address their
9 concern they are raising.

10 Q. Uh-huh. Is that your complete
11 answer? I couldn't tell if you were done.

12 A. I apologize. What is the
13 complete question?

14 (Record read.)

15 THE WITNESS: It affects my
16 reading of it because I -- because it's
17 true that they compared '12 to '14 and
18 '14 to '12. Excuse me.

19 Q. If you will stay on page 142 of
20 their report. They make a statement in the
21 first sentence of the first full paragraph:
22 "Thus, however, ostensibly technical and
23 random the changes, any decision to alter
24 the location of Election Day polling
25 stations may have a disruptive effect on a

Michael C. Herron, Ph.D. - February 26, 2020

64

1 voter's likelihood of going to the polls."

2 Do you see that?

3 A. I see that sentence.

4 Q. Do you disagree with that
5 conclusion?

6 A. The conclusion is caveated with
7 "may," so I -- I don't disagree.

8 Q. Okay.

9 MR. CREELAN: Josh, when is a
10 convenient time?

11 MR. BELINFANTE: We can break
12 now.

13 (Break taken.)

14 Q. I think we can go ahead and put
15 away the Amos, Smith and St. Claire article
16 and turn back to your report, which is
17 Exhibit 1. We will start with a question
18 on page -- paragraph 40, which starts on
19 page 18 and goes over to 19. If you could
20 just read that paragraph.

21 Again, forgive me for what is
22 going to sound like very basic questions,
23 but do you conclude that the six registered
24 voters for whom a county identifier is not
25 provided over 6 million registered voters

1 on the 2014 file is a statistically
2 significant number?

3 A. I don't think that -- this is a
4 count. So the rates of six divided by
5 6,053,891, that's the rate of individuals
6 who don't have county ID's.

7 Q. Let me ask you this way: That
8 would not cause you to change any of your
9 conclusions that you reach in your report,
10 would it?

11 MR. CREELAN: Objection as to
12 form.

13 Q. That fact that six out of the
14 over 6 million people don't have county
15 ID's?

16 A. No.

17 Q. Okay. Paragraph 45 describes
18 the -- it says in the last sentence, "This
19 geoplace exercise was successful for
20 approximately 99.13 percent of Georgia's
21 6,053,385 registered voters in 2014." Do
22 you see that?

23 A. I do.

24 Q. Okay. The missing amount doesn't
25 cause you to question the conclusions in

1 your report, does it? That -- the
2 difference between 100 percent and 99.13?

3 A. No. I -- it doesn't cause me to
4 conclude that.

5 Q. Let's -- you begin on page 22
6 talking about the 2016 voter file, and in
7 paragraph 49 it says, "I used the 2016
8 voter file only for the purpose of
9 identifying the races of the registered
10 voters who are listed in it."

11 Why did you make that decision
12 and only use the 2016 voter file to
13 identify race?

14 A. It's because I am not -- in this
15 -- in this report I am interested in
16 polling place changes between '14 -- 2014
17 and 2018. 2016 is an intermediate year. I
18 don't invoke anything in my report -- I
19 don't consider changes between '14 and '16
20 separately from '16 to '18.

21 Q. Uh-huh.

22 A. So there is nothing -- well, I
23 will just leave it at that. I don't
24 consider -- I considered changes from '14
25 to '18.

Michael C. Herron, Ph.D. - February 26, 2020

67

1 I use race in that voter file
2 because I am trying to get a complete -- as
3 complete a record as possible of
4 individuals' races in 2014.

5 Q. Okay. And I guess my question
6 is: Why did you focus on 2014 and 2018 and
7 not look at the intervening election of
8 2016?

9 A. I am interested in the entire
10 post Shelby County period, which actually
11 is -- extends beyond the purview of my
12 analysis, the scope of my analysis.

13 So the reason I looked at '14 to
14 '18 is because it's as close as I can get,
15 given the data that I have, to post Shelby
16 through 2018.

17 Q. Okay. And I get that from your
18 perspective basis. Why did you not look at
19 voter turnout and voting behavior in the
20 2016 election? What was it about that
21 election that caused you not to consider
22 it?

23 MR. CREELAN: Objection.

24 THE WITNESS: Could you read the
25 question, please?

Michael C. Herron, Ph.D. - February 26, 2020

68

1 (Record read.)

2 Q. Do you have an answer?

3 A. I apologize. I was waiting for
4 you.

5 Q. I am sorry. Ignore me. Sorry.

6 A. I would say there are several
7 factors: One, to restate what I said
8 before, I am interested in '14 to '18, and
9 '16 happens to be in the middle.

10 Q. Uh-huh.

11 A. The other is that '14 and '18 are
12 both midterm elections. They don't have
13 presidential contests. So it's more
14 natural to compare '14 to '18.

15 As we talked earlier before the
16 break, one can compare elections of
17 different types, but it's, I think, easier
18 to draw comparisons between '14 and '18.

19 And, honestly, the more important
20 reason is that my interest is the post
21 Shelby period, and I wanted to get as close
22 as I can to the endpoints of that.

23 MR. BELINFANTE: Presuming the
24 hypothetical that -- well, let's not do
25 that yet. Let me show you three

1 documents, which we will mark as
2 Exhibit 5, and 6 and 7. I will
3 represent to you that these are
4 documents that I pulled off the Georgia
5 Secretary of State's website.

6 For the record, Exhibit 5 is the
7 results of the 2018 election.
8 Exhibit 6 is the 2016 election, and
9 Exhibit 7 is the 2014, and for the
10 purposes of the question -- there is
11 more to this -- I am only going to be
12 asking about the top line information
13 about total turnout. So I don't have
14 every race that's on the ticket at that
15 time.

16 (Defendant's Exhibit 5, results
17 of the 2018 election, marked for
18 Identification.)

19 (Defendant's Exhibit 6, results
20 of the 2016 election, marked for
21 Identification.)

22 (Defendant's Exhibit 7, results
23 of the 2014 election, marked for
24 Identification.)

25 Q. All right. So in -- on

1 Exhibit 5, in 2018, forgive me, on the
2 third page of the exhibit, it shows that
3 the voter turnout was 61.44 percent and the
4 ballots cast was 3,949,905. Do you see
5 that?

6 A. I do.

7 Q. Okay. That would be -- these are
8 the questions I am going to ask. I just
9 want to point to where I am getting my
10 numbers.

11 Exhibit 6 shows on the top line
12 that the voter turnout was 76.53 percent,
13 and the ballots cast were 4,165,405. Do
14 you see that?

15 A. I do.

16 Q. Okay. And Exhibit 7 for the 2014
17 election we see the voter turnout is 50.03
18 percent, and the ballots cast being
19 2,596,947 votes. Do you see that?

20 A. I do.

21 Q. Okay. So with those in front of
22 us, let me ask these questions: Your
23 report does not distinguish when a voting
24 polling location change occurred; and by
25 that I mean, you don't consider whether it

1 occurred after the 2014 election or after
2 the 2016 election; isn't that true?

3 A. That's a compound question.
4 Could you please?

5 Q. Okay. Let me try to ask it a
6 different way.

7 Your report deems a polling
8 location change to have occurred if it
9 occurred any time between 2014 and 2018; is
10 that correct?

11 A. Yes.

12 Q. Okay.

13 A. That is correct.

14 Q. And so, conceivably, the change
15 could have occurred before the 2016
16 election or after the 2016 election; is
17 that right?

18 A. Conceivably, that is correct.

19 Q. Okay. And you would agree with
20 me that presuming this certified
21 information is true in front of you, that
22 the turnout in 2016 was higher than in 2014
23 and 2018?

24 MR. CREELAN: Objection as to
25 form.

Michael C. Herron, Ph.D. - February 26, 2020

72

1 THE WITNESS: I need to confirm
2 these numbers.

3 Q. Sure. That's fine.

4 A. Yes. I will confirm that
5 3.9 million is -- excuse me. I am
6 backwards.

7 Could you please repeat the
8 question?

9 MR. BELINFANTE: Sure. Or -- I
10 am sorry. Go ahead.

11 (Record read.)

12 THE WITNESS: Yes. I would agree
13 that 4.1 million, approximately, is
14 greater than approximately 3.9 million
15 and greater than approximately
16 2.6 million.

17 Q. Okay. So you indicated that one
18 of the reasons you did not look at or
19 analyze the elections in 2016 is that you
20 were interested in the post Shelby period
21 from '14 to '18.

22 My question is: Wouldn't it also
23 be relevant to know the impact of Shelby,
24 if any, in the first presidential election
25 after the Shelby decision?

1 MR. CREELAN: Objection as to
2 form.

3 THE WITNESS: I recall not
4 agreeing with something with which you
5 started. I apologize.

6 Can you reread the question.

7 (Record read.)

8 THE WITNESS: Excuse me. The
9 post Shelby period doesn't start in
10 2014.

11 Q. 2013.

12 A. Okay. Thank you.

13 Q. So let me ask this way: Why, if
14 you are studying Shelby, would you not be
15 interested in the first presidential
16 election after the Supreme Court decision?

17 MR. CREELAN: Objection as to
18 form.

19 THE WITNESS: I don't think I
20 would say that I am disinterested in
21 that. What I would say is that I am
22 trying to study the entire post Shelby
23 period to the extent that I can.

24 Q. But if we see an increased
25 turnout in 2016, which clearly we do, why

1 would that not be something to consider
2 when examining the impact of polling
3 location changes?

4 MR. CREELAN: Objection as to
5 form.

6 THE WITNESS: Could you please be
7 clearer about what you mean by, as we
8 do when I think you are referring to
9 increased turnouts?

10 Q. Yes. I guess my question is:
11 Why did you not consider when you had more
12 voters come cast ballots in 2016, why was
13 that not considered in your analysis, in
14 your expert report?

15 MR. CREELAN: Objection as to
16 form.

17 THE WITNESS: Just to be clear,
18 when you say "more voters," you mean
19 approximately 4,102,016 compared to 2.6
20 million in 2014?

21 Q. And 3.9 million in 2018, yes.

22 A. Well, it doesn't surprise me that
23 there are more voters in 2016. There
24 generally are --

25 Q. Right.

1 A. -- in presidential years.

2 Q. Sure.

3 A. So the fact that 4.1 million is
4 greater than those other two numbers is not
5 notable, I don't believe.

6 The reason I didn't look at that
7 was because I was trying to understand the
8 entirety of the post Shelby period. I am
9 not arguing that I am not interested in
10 that, I think as you were expressing. I am
11 just explaining that my objective in this
12 litigation was to understand the post
13 Shelby period, and I got it as close as I
14 could to it.

15 Q. Was there anything in the -- was
16 there any analysis that you performed in
17 the expert report, in the various different
18 analyses that you did, was there anything
19 that prevented you from conducting that
20 same analysis as it applied to the 2016
21 election?

22 A. I haven't done the analysis, of
23 course, so I am speculating, but I believe
24 that the answer is no.

25 Q. If you could turn to paragraph 65

1 of your report, which is on page 27? There
2 you state that, "If a given registered
3 voter's polling place was closed between
4 2014 and 2018 General Elections, this means
5 that said registered voter was assigned to
6 a new polling place as of...2018." Do you
7 see that?

8 A. As of November of 2018.

9 Q. Yes. I am sorry.

10 A. Yes. I see that.

11 Q. Okay. My question is: When you
12 were looking at -- does your report --
13 strike that. Let me start over.

14 If someone gets a new polling
15 place because the county has added polling
16 locations as opposed to closing, would that
17 still be considered in your report as a new
18 polling location?

19 A. Which section of your report are
20 you referring to? Of my -- excuse me.
21 Which section of my report are you
22 referring to?

23 Q. Well, I may have pointed you to
24 the wrong paragraph, generally, but I guess
25 when you are -- more specifically I guess,

1 when you are analyzing the impact of
2 polling place changes on voting, you are
3 looking at three potential outcomes:
4 Number one would be somebody gets assigned
5 a new precinct, and then that precinct
6 could have them go vote in a new polling
7 location.

8 (Reporter clarification.)

9 Q. And then that new precinct would
10 assign them to a new polling location.
11 Would you consider that -- that's
12 incorporated within your analysis, correct?

13 A. Which analysis do you mean?

14 Q. Well, they all look at voting
15 polling place changes, right?

16 A. I would say that's a rough
17 summary, yes.

18 Q. Okay. So one of the ways that
19 polling place change could happen is if a
20 voter is assigned a new precinct, and then
21 that precinct goes to a different polling
22 location than the old precinct. They
23 haven't moved, but that residence is now in
24 a different precinct; would you agree with
25 that statement?

1 A. I would agree that if a
2 registered voter is assigned a new
3 precinct, and if the polling place for the
4 new precinct is different than the old
5 precinct, then the registered voter has a
6 new polling place.

7 Q. And that gets wrapped into your
8 changes in polling locations?

9 A. It could. Depending on whether
10 the voter moved or not.

11 Q. Okay. And if a non-moving voter
12 is assigned a different polling location
13 because the county has added polling
14 locations, that would be incorporated into
15 your analysis as well, correct?

16 A. It --

17 MR. CREELAN: Objection as to
18 form.

19 THE WITNESS: Which -- there are
20 a couple of different analyses. Can
21 you tell me which one you mean?

22 Q. Does your analysis distinguish
23 between when a county increases the number
24 of polling locations and when a county
25 closes the number of polling locations? Or

1 reduces, not closes. Sorry. Reduces the
2 number of polling locations?

3 MR. CREELAN: Objection as to
4 form.

5 THE WITNESS: Would you repeat
6 the question, please?

7 (Record read.)

8 THE WITNESS: My analysis looks
9 at whether individuals -- let me say it
10 again. There are a couple of different
11 pieces of my report.

12 Q. Uh-huh.

13 A. So I'm using the term "analysis"
14 very broadly. It looks at whether
15 individuals, registered voters in Georgia,
16 had different polling places.

17 Q. Right. And they could have a
18 different polling place because the county
19 increased the number of polling locations;
20 isn't that right?

21 A. That is possible.

22 Q. Okay. And are any of the
23 analyses that you conducted, do they
24 distinguish between a new polling location
25 because the county has increased the number

1 of polling locations and a new polling
2 location because the county has decreased
3 the number of polling locations?

4 A. My analyses, again, speaking
5 broadly, look at whether individuals had
6 new polling places. I don't engage the
7 question of the rationale. You mentioned
8 "because" in your sentence, in your
9 question to me; and I interpret "because"
10 as an explanation for why the polling
11 places may or -- may have changed. I don't
12 engage that question. I report in my
13 affidavit that racial groups in like the
14 counts of people who receive new polling
15 places, but I don't offer any opinion as to
16 why they did.

17 Q. And why they did in this case as
18 opposed to what I was asking earlier about
19 intent. I am only asking here about why
20 they did it, because there is a new -- an
21 increased number of polling locations or
22 decreased. For the purposes of your
23 report, any time somebody has to vote in a
24 new polling location, that is considered,
25 period, correct?

Michael C. Herron, Ph.D. - February 26, 2020

81

1 MR. CREELAN: Objection as to
2 form.

3 Q. You don't treat differently when
4 someone gets a new polling location
5 because, again, the county has -- I think
6 we have covered it.

7 A. Okay.

8 Q. If I need to come back to it, I
9 will.

10 All right. We talked earlier
11 about the Brady and McNulty study and how
12 they write about what's called search
13 costs, which I think generally means that
14 the voter has to research where their new
15 polling location is going to be, and so
16 whenever you assign someone a new polling
17 location, there are search costs associated
18 with that.

19 Would it matter for a voter in
20 Georgia if the polling location change
21 occurred after the 2014 election and before
22 the 2016 election? In other words, giving
23 them more time to determine where to vote
24 in the 2018 election for the purpose of
25 considering search costs?

1 In other words, does search costs
2 change based on the amount of time that
3 elapses between the change in the voting
4 location and the vote that is being
5 studied?

6 MR. CREELAN: Objection as to
7 form.

8 THE WITNESS: I apologize. What
9 was the question?

10 (Record read.)

11 THE WITNESS: If we define search
12 costs as the amount of effort required
13 to figure out where to vote broadly --

14 Q. Sure.

15 A. -- I think the answer is no
16 because your question is asking me: Does
17 the search cost depend on, I believe, when
18 the person is notified?

19 Q. Uh-huh. Yes. I'm sorry.

20 A. Does the -- I'm sorry. I'm not
21 totally understanding what you are
22 trying -- want me to answer here.

23 Q. Okay. If a polling location
24 changes between the 2014 election and the
25 2016 election, would you believe that the

1 search cost associated with that change is
2 higher for the voter in the 2016 election
3 or for that same voter in the 2018
4 election, presuming that there is not
5 another change in the polling location?

6 A. I think the way that you are
7 characterizing search costs is -- no.
8 Search costs -- as you have explained them
9 to me, and I concur with this -- is the
10 amount of effort required to figure out
11 where to vote.

12 Q. Uh-huh.

13 A. So holding all other
14 environmental factors -- all other features
15 of an individual's life fixed, I would say
16 that the amount of time and effort required
17 to figure out where to vote starting in a
18 month before one election is the same as
19 two months before another election.

20 Q. Okay. And that's not what I am
21 asking. So I am going to thank you for
22 clarifying.

23 My question is: If a voter is
24 voting in polling location A in the 2014
25 election; they are then assigned to polling

1 location B for the 2016 election; and then
2 they remain at polling location B for the
3 2018 election, would the search cost
4 associated with voting be higher for that
5 voter in the 2016 election or the 2018
6 election?

7 A. I would say if we define "search
8 costs" as the amount of time and effort,
9 broadly construed, to figure out where to
10 vote if one has a new location, then there
11 would be zero search costs assuming that
12 one is confident that his or her polling
13 location didn't change.

14 So I presume there is some search
15 cost even when -- to confirm that one's
16 polling place hasn't changed.

17 Q. Okay.

18 A. So what is my -- what is the
19 question now?

20 Q. You have answered my question.

21 A. Okay.

22 Q. You have answered my question.

23 So I guess here's -- and it gets
24 back to why 2016 is not considered.

25 If someone's voting location

1 changes between the 2014 election and the
2 2016 election, and that voter votes in the
3 2016 election, but for whatever reason does
4 not vote in the 2018 election, is it
5 reasonable to consider that voter or is it
6 reasonable to consider the change of that
7 location a reason for the voter not to vote
8 in the 2018 election?

9 MR. CREELAN: Objection as to
10 form.

11 THE WITNESS: I have to think
12 about this one, insofar as my analysis
13 doesn't look at 2016 for reasons that I
14 just described.

15 Q. I mean, take your time. Are you
16 saying you need to conduct additional
17 analysis?

18 A. I am -- okay. What is the
19 question?

20 Q. Okay. Let's take a hypothetical
21 vote. They vote in the 2014 election.
22 Their polling location has changed between
23 the 2014 election and the 2016 election.

24 They vote again at the new
25 location in 2016. Then, for whatever

1 reason, they don't vote in the 2018
2 election. It would not be reasonable to
3 presume a correlation between the new
4 voting location between 2014 and 2016 and
5 the lack of a vote in 2018, wouldn't you
6 agree?

7 MR. CREELAN: Objection as to
8 form.

9 THE WITNESS: I haven't studied
10 2016. I tend to think that I would
11 agree with that, but I would have to,
12 honestly, incorporate 2016 in my study,
13 which I have not done.

14 Q. Okay. Paragraph 80 on page 32,
15 if you will just take a second to read that
16 because I have got a couple of questions
17 about it.

18 My question is: If a person --
19 what is the more relevant factor when
20 looking at the impact of changing the
21 polling locations? Is it the actual change
22 in the polling location or is it the number
23 of times a person moved? Because I am just
24 trying to understand what you are
25 describing is the minor limitation in

1 paragraph 80.

2 MR. CREELAN: Objection as to
3 form.

4 THE WITNESS: What is the
5 question?

6 Q. Sure. Let me ask it this way:
7 Can you just tell me -- you describe a
8 couple of minor limitations -- to use your
9 phrase -- in using the address field from
10 2014 to 2018 in paragraph 80. One of them
11 is, as I understand -- tell me if this is
12 correct or wrong -- that someone could move
13 more than once during that time period, and
14 you wouldn't pick up on that? Is that a
15 fair description of what you are describing
16 in paragraph 80?

17 A. Yes.

18 Q. Okay. If someone moved one, two
19 or ten times, under your analysis, if they
20 get a new polling location or either
21 counted as having a new polling location or
22 not, in other words, they could move next
23 door and presumably they are going to have
24 the same polling location. They can move
25 across, town and presumably they will have

1 a different polling location.

2 My question is: What is the
3 relevance, if any, of the number of times
4 somebody moves versus just what their new
5 polling location number is?

6 MR. CREELAN: Objection as to
7 form.

8 THE WITNESS: I am -- I am simply
9 stating in paragraph 80 that my
10 assessment of the number of movers
11 will -- if people move more than once
12 in that period -- understate the amount
13 of movement.

14 Q. Okay. But why is movement itself
15 relevant as opposed to just number of
16 voters with new polling locations?

17 A. Because in part of my analysis I
18 am interested in understanding whether
19 individuals had different, same or
20 different polling locations in two
21 elections --

22 Q. Uh-huh?

23 A. -- and if an individual moved in
24 that period, it wouldn't be reasonable to
25 assume that a different polling place is

1 because of an assignment of a different
2 polling place. An individual moved. It
3 could be actually across the street. It
4 depends on how the boundaries are laid out.

5 Q. Sure.

6 A. An individual could cross some
7 boundary, and therefore, by virtue of
8 moving, have a new polling place
9 assignment. I am done.

10 Q. Okay. I think we are on the same
11 page. I am just trying to figure out what
12 the limitation is because, as I understand
13 it, somebody gets picked up in your
14 analysis if their polling location changes
15 and they haven't moved, right? Because you
16 are studying non-moving voters and changes
17 to polling locations for non-moving
18 voters. Those are the -- that's -- those
19 are the populations you are looking at; is
20 that fair?

21 A. Some of my analysis turns on non-
22 movers, and some does not.

23 Q. Okay. Probably -- maybe I will
24 just address it because it comes up.

25 Paragraph 84, which is on

1 page 33, talks about 30.1 percent,
2 approximately, of Georgia who appeared on
3 the 2014 voter file moved sometime between
4 2014 and 2018.

5 Do you know of any data that
6 would allow you to break down that
7 30.1 percent by race other than the
8 analysis you did here, the census block,
9 the 2016? Is there census data? Is there
10 any data out there that tracks moving by
11 race?

12 MR. CREELAN: Objection as to
13 form.

14 THE WITNESS: There are --
15 it's -- some of the data is actually
16 cited. There are census data that
17 study movement by race.

18 Q. Uh-huh.

19 A. And -- but there is no census
20 data that I know of that studies registered
21 voters' movement by race, which is why I
22 did what I did.

23 Q. Okay. Part of your analysis, and
24 I think you testified to this earlier, is
25 you are trying to see what is the impact of

1 Shelby on polling location changes; is that
2 a fair description?

3 MR. CREELAN: Objection as to
4 form.

5 THE WITNESS: I wouldn't
6 necessarily characterize it the way you
7 did.

8 Q. Okay. How would you characterize
9 what you are examining as it relates to
10 Shelby and polling location changes?

11 A. My objection -- my objective --
12 excuse me -- in this report, and I stated
13 this in paragraph 7, was to understand
14 whether polling place -- I use the term
15 "adjustment" in paragraph 7, third line --
16 my objective is to assess those polling
17 place adjustments, and the broader context
18 of this report is that it is conducted in
19 the post Shelby period and that that
20 context is important. I discuss this in
21 paragraph 12 and 13, and that broader
22 context is post Shelby County.

23 Q. But there is really no
24 comparative analysis in this report, other
25 than Warren County and Forsyth County that

1 looks at polling closure rates, numbers, if
2 you will, prior to the Shelby County
3 decision and after the Shelby County
4 decision; isn't that right?

5 A. Outside of those examples, I
6 don't have any data from the State that
7 would allow me to study the rate of polling
8 place closures when pre-clearance was still
9 legal. I don't want to make a legal
10 judgment here.

11 Q. Sure.

12 A. Let's just say pre Shelby County.

13 Q. Sure. That's fine. So
14 hypothetically -- well, no. You answered
15 my question.

16 Let's look at paragraph 89. You
17 cite Warren County and Forsyth County as
18 the two examples where you have -- you
19 refer to as indirect evidence of polling
20 place changes prior to the Shelby decision;
21 and you have examined the populations of
22 the demographics of the populations of
23 Warren County and Forsyth County in
24 paragraphs 90 and 91, given that in both
25 Warren County and Forsyth County closed

1 polling locations prior to Shelby County's
2 decision; isn't that right?

3 A. I believe that you stated that my
4 discussion of these counties -- excuse me.
5 That was a very long question you asked,
6 and there was something in the very
7 beginning that I didn't agree with.

8 Q. Okay.

9 A. I apologize.

10 Q. That's fine. Let me try to ask
11 it this way: Your report in paragraphs 89
12 to 91 refers to Warren County and Forsyth
13 County as examples of two counties that
14 closed polling locations prior to the
15 Shelby County decision; isn't that right?

16 MR. CREELAN: Objection as to
17 form.

18 THE WITNESS: No.

19 Q. Okay. So then what's the
20 relevance of Warren County and Forsyth
21 County in this report specifically with
22 regards to paragraphs 88 to 91?

23 A. The relevance is that this
24 Section 4.7.1 discusses the fact that I
25 don't have a 2012 voter file because it's

1 my -- as I point out in paragraph 87 --
2 it's my understanding that the defendants
3 haven't produced one.

4 Since my report starts in 2014
5 and goes to 2018, and since that doesn't
6 include the entire post Shelby period, it's
7 raising the question: Did anything happen
8 between Shelby and 2014? I don't have data
9 that speak directly to that.

10 I brought up those two counties
11 as examples, and they are examples only;
12 that something happened with respect to
13 polling places in those counties between
14 2012 and 2014.

15 Q. Okay. But we don't -- go ahead.
16 Sorry.

17 A. And that makes me think that
18 there may have been -- and I can't say for
19 sure because I don't have the data to
20 address it -- changes to polling places in
21 Georgia that are post Shelby, but not
22 included in my report.

23 Q. I see.

24 A. And so that's why I referred to
25 the data to -- excuse me. I referred to

1 those two counties in paragraph 89, and I
2 referred to them as indirect because I find
3 that accurate.

4 Q. Okay. Got it. So we don't know
5 for Warren County and Forsyth County if the
6 changes that you address were pre Shelby or
7 post Shelby; is that correct?

8 MR. CREELAN: Objection as to
9 form.

10 THE WITNESS: I'm not sure what
11 you are asking me.

12 Q. Okay. Do you know if the changes
13 that you referred to in the Warren County
14 and Forsyth County polling locations
15 occurred prior to the effective date of the
16 Shelby decision or after the effective date
17 of the Shelby decision?

18 A. I don't know for sure --

19 Q. Okay.

20 A. -- when -- the dates of those
21 changes.

22 Q. Got it.

23 A. I believe, from my reading of the
24 Democracy Diverted report, that that was
25 engaging post Shelby changes, but I can't

1 -- I don't have the data that they used --

2 Q. Uh-huh.

3 A. -- all of it. Maybe I have some
4 of it, but I am not commenting on the
5 veracity of that report --

6 Q. Okay.

7 A. -- in terms of pinning down these
8 dates exactly. So I am suspicious that the
9 Warren County change was between Shelby
10 County and 2014; but I don't know, and
11 that's why I refer to this as indirect
12 evidence, and that is why on paragraph --
13 excuse me -- in paragraph 92 I noted that
14 if there are other changes that are not
15 part of my report due to lack of other
16 data, then I am underestimating the total
17 set, the totality of post Shelby polling
18 place changes in Georgia.

19 Q. Okay. Got it. And effectively,
20 that would be five to six months in 2013?
21 I mean, the time that a county could change
22 a polling location post Shelby and prior to
23 appearing on the 2014 voter file would be
24 sometime in 2013 after the Shelby decision,
25 but prior to the creation of the 2014 voter

1 file; is that the period of time that you
2 don't know about?

3 A. The period of time I don't know
4 about is the date of Shelby, which is in my
5 report, I don't remember the exact date --

6 Q. Yes.

7 A. -- up to the date of the creation
8 of the 2014 voter file, which I believe,
9 again, this date I think is in my report.
10 I will just say November 2014, and I
11 believe Shelby County was June. Should I
12 check?

13 Q. It's fine. I mean, we can agree
14 there is a point in time where Shelby
15 becomes effective.

16 A. So if it were June,
17 hypothetically, that's approximately six
18 months to the end of the year, and that
19 takes us to the beginning of 2014, and then
20 there are approximately 11 months to the
21 creation of the November 2014 voter file.
22 That would be 17 months.

23 Q. Okay. I am following you.

24 A. These are approximate, of course.

25 MR. BELINFANTE: Yes. Of course.

1 All right.

2 I am going to -- you just
3 referred to the Democracy Diverted
4 report, which we will mark as Exhibit
5 11.

6 THE REPORTER: 8.

7 (Defendant's Exhibit 8, Democracy
8 Diverted report, marked for
9 Identification.)

10 Q. This is the report you were
11 referring to, is that correct, the
12 Exhibit 8?

13 A. It is correct.

14 Q. Okay. Do you personally know any
15 of the authors of the Democracy Diverted
16 report?

17 A. Could you please show me where
18 you are finding a list of authors?

19 Q. I don't necessarily have any. So
20 I didn't know if you knew it from your own
21 personal knowledge; you talked to somebody
22 who was an author of the report and told
23 you that they were. I see acknowledgments
24 of advocates, but I don't -- and I see that
25 on page 2 it identifies several people who

1 assisted, but I had a hard time determining
2 who the authors actually were.

3 So I guess let me ask this
4 question: Do you know who the authors, the
5 individuals who authored the Democracy
6 Diverted report are?

7 A. No.

8 Q. That's a much more effective way
9 of asking the question. All right.

10 Did you find the Democracy
11 Diverted report to be reliable in terms of
12 its methods?

13 A. I didn't evaluate the report --

14 Q. Okay.

15 A. -- in my affidavit.

16 Q. Okay. I ask you to look back at
17 what they call the Appendix, which begins
18 on page 56, and then the portion that talks
19 about Georgia starts on page 59.

20 Would you agree that the report
21 for all of its source information as it
22 relates to Georgia is the AJC, which I will
23 represent is The Atlanta Journal and
24 Constitution?

25 MR. CREELAN: Objection as to

Michael C. Herron, Ph.D. - February 26, 2020

100

1 form.

2 THE WITNESS: I have very quickly
3 looked down the column titled 2014
4 Midterm Source --

5 Q. Uh-huh.

6 A. -- and I have noted based on this
7 very quick look, that AJC appears to be the
8 only source listed.

9 Q. Okay. So just to be clear, you
10 are not opining on any of the conclusions
11 they reach in the Democracy Diverted report
12 in your report as it relates to Georgia?

13 A. I believe that the only place I
14 cite this report is in the footnote that we
15 discussed, which would be 28.

16 Q. Uh-huh.

17 A. That's referred to in
18 paragraph 90 of my affidavit.

19 Q. Okay.

20 A. I don't verify the Democracy
21 Diverted results for Warren County. I am
22 citing that report.

23 Q. All right. Paragraph 94 on
24 page 36 starts a discussion of the census
25 block analysis.

1 A. Excuse me. What page?

2 Q. Page 36. My question is about
3 this statement in paragraph 96, which is on
4 page 37. The paragraph reads, "The
5 advantage of such an analysis is it
6 alleviates the problems caused by the fact
7 that the 2014 voter file lacks a race
8 field. The disadvantage of this approach,
9 however, is that it allows consideration
10 only of places in Georgia that are almost
11 all black or almost all white."

12 Why is that -- why did you
13 identify that as a disadvantage, the fact
14 that it allows only consideration of the
15 places that are almost all black or all
16 white? Why is that a disadvantage to the
17 statistical analysis?

18 A. I did it because I think
19 scientifically it's important to point out
20 pluses and minuses when one offers a
21 research design.

22 Q. Uh-huh.

23 A. When one looks at homogeneous
24 census block groups that are racially --
25 excuse me -- when one looks at census block

1 groups that are racially homogeneous, say
2 extremely so, a hundred percent one racial
3 group, that doesn't include all of Georgia.
4 So I wanted to be up front that I am not
5 including all of Georgia when I do that
6 analysis.

7 Q. Did you find it to be
8 representative of Georgia generally? And
9 by that I mean, do most people in Georgia
10 live in an all-white or all-black census
11 block or do most people live in a more
12 diverse census block? I think it's
13 paragraph 125 is where you identify that.

14 A. I was looking for Table 2.

15 Q. I see. Okay.

16 A. The answer is that most
17 Georgians, registered voters, do not live
18 in racially homogeneous census block
19 groups.

20 MR. BELINFANTE: I am going to
21 show you what we will mark as
22 Exhibit 9.

23 (Defendant's Exhibit 9, 2010
24 Census Georgia Profile, marked for
25 Identification.)

1 Q. And my question is on the second
2 page of this document, which comes from the
3 census, and it cites two numbers for census
4 blocks: One for 2010 and one for 2020.

5 Which numbers did you use in this
6 report, the 2010 census blocks or the -- I
7 am sorry -- the 2000 census blocks, not
8 2020.

9 A. First of all, I would like to be
10 clear I am using block groups.

11 Q. Okay. Okay.

12 A. Not blocks.

13 Q. Got it. Okay.

14 A. 2010.

15 Q. 2010. All right. Thank you.

16 And do you know if census block
17 groups in Georgia cross county lines?

18 A. I believe that the answer is no.

19 Q. Could you turn to paragraph 99 in
20 your report, which is on page 38? My
21 question -- I just wasn't following what
22 you did here. It may be cleared up by this
23 question, which is probably answered
24 somewhere else in your report.

25 Does the 2018 voter file identify

1 the race of voters?

2 A. Excuse me. This is going to take
3 me a second to find something.

4 Q. That's fine. Yes.

5 A. I apologize. What was your
6 question?

7 Q. Sure. My question is: Does the
8 2018 voter file indicate a voter's race?

9 MR. CREELAN: Just for
10 clarification, your question was
11 referring the witness to
12 paragraph 99 --

13 MR. BELINFANTE: Yes.

14 MR. CREELAN: -- of the report on
15 page 36.

16 THE WITNESS: Thank you. I am
17 referring now to paragraph 51 on
18 page 22.

19 Q. Uh-huh.

20 A. And the answer is yes.

21 Q. Okay. And your report considers
22 2016 only for the purpose of identifying a
23 voter's race; isn't that right?

24 A. What do you mean by "considers
25 2016"?

1 Q. I'm sorry. Your report uses the
2 2016 voter file only for the purpose of
3 identifying the race of the voter, correct?

4 A. Effectively.

5 Q. Okay. Is there a reason, then,
6 that you needed the 2016 report at all if
7 the 2018 includes the voter's racial
8 information?

9 A. Yes.

10 Q. And what would that be?

11 A. Can you direct me to the earlier
12 paragraph that you were talking about?

13 Q. Paragraph 49, which is on
14 page 22.

15 A. I apologize. It was the latter
16 paragraph.

17 Q. Oh, the one we were talking about
18 before is -- my question in my own head
19 stemmed from paragraph 99.

20 A. Thank you.

21 Q. But I haven't explained why I had
22 a question. That's just what triggered the
23 question to me about the 2018 report. So I
24 don't know that paragraph 99 is going to
25 help you in answering that question. It

1 may.

2 A. It does.

3 Q. Okay.

4 A. I will read starting with -- in
5 the middle of the paragraph of this quote
6 from my report.

7 Q. Yes.

8 A. "I find an additional 8,113
9 registered voters in the 2000 voter file
10 whose registration numbers do not appear in
11 the 2016 voter file, but do appear in the
12 2018 voter file."

13 There is a typo. It should be
14 "voter file," not "filer." That answers
15 your question.

16 Q. Okay. All right. What is the
17 statistical relevance of that, if they
18 appear in 2014 and not 2016?

19 A. I am not sure, but I am just
20 trying to be open of where I got the race
21 data from 2014. I think the "open" is the
22 wrong word. I am trying to be transparent
23 about where I -- what files contributed to
24 the race classifications of individuals in
25 the 2014 voter file.

1 Q. Okay. Paragraphs 101 and 102,
2 and specifically paragraph 102, which cites
3 a census report as stating that black
4 individuals on average move more frequently
5 than white individuals.

6 Other than -- well, do you find
7 that census report to be credible?

8 A. I am comfortable in my affidavit
9 here and in my scholarly work in general of
10 using census data.

11 MR. BELINFANTE: Okay. I
12 attempted -- I went to the website that
13 you cite in paragraph 31 and attempted
14 to print it out. We will mark this as
15 Exhibit 10 it looks like. The print
16 came out in an odd way. I don't know
17 why, but I believe this is the report
18 that you were referring to. It
19 certainly has the same date. And,
20 again, I will tell you, I put in the
21 address.

22 (Defendant's Exhibit 10, 2020
23 Census document, marked for
24 Identification.)

25 Q. Does this generally look like the

1 information you relied on in the cite in
2 paragraph 31?

3 A. I don't want to say it generally
4 looks like.

5 Q. Okay.

6 A. But I would say I believe this is
7 the report.

8 Q. Okay.

9 A. And there were a variety of
10 tables that are not included in this
11 printout as well.

12 Q. Okay. I will try to take a look
13 at those.

14 It says in the fourth paragraph
15 that, "Among regions, the South saw the
16 greatest number of people moving out
17 (901,000), but also saw the largest inflow
18 of people moving into the region
19 (940,000)." Do you see that?

20 A. I do.

21 Q. Okay. And what period of time
22 does this report cover?

23 A. I believe, based on the title,
24 2015 to 2016.

25 Q. Okay.

1 A. Which struck me as relevant
2 because that's in my period of study.

3 Q. Got it.

4 And so -- and I truly just don't
5 know the answer to this -- in terms of
6 census data, the report obviously has a
7 date of November 16th of 2016. Do you know
8 if this is really looking at calendar year
9 2015 or is there a point in time that the
10 census typically, or perhaps you know in
11 this study, cuts it off in 2016?

12 A. It's my understanding that census
13 reports are accompanied by effective dates.

14 Q. Okay.

15 A. And this report draws on -- as it
16 -- the end of the first printed page it
17 mentions current population survey,
18 economic supplement and so forth. I
19 believe it also draws from the American
20 Community Survey --

21 Q. Uh-huh?

22 A. -- and those -- it is my
23 understanding that all of those reports
24 have effective dates, and I believe that
25 would answer your question as to when the

Michael C. Herron, Ph.D. - February 26, 2020

110

1 data on which this is based, official -- I
2 don't want to use that term in a legal
3 sense -- are effective based on what this
4 census states.

5 MR. BELINFANTE: Okay. All
6 right.

7 (Discussion held off the record.)

8 (Luncheon recess taken at 12:01
9 p.m.)

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Michael C. Herron, Ph.D. - February 26, 2020

111

1 AFTERNOON SESSION

2 (12:36 p.m.)

3 MICHAEL C. HERRON, Ph.D.,

4 resumed and testified as follows:

5 EXAMINATION CONTINUED

6 BY MR. BELINFANTE:

7 Q. Let me ask you to look at page 42
8 of your report, paragraph 112, which
9 describes Table -- or, excuse me, Figure 1.

10 Do you have a version of Figure 1
11 that lists on the X axis the counties that
12 are there?

13 A. I do not, but I could make one.

14 MR. BELINFANTE: Okay. Would you
15 object to doing so, and getting us a
16 copy? It would just be easier for us
17 to see that.

18 MR. CREELAN: Well, why don't we
19 discuss it off the record? Let's
20 discuss it after, but I understand the
21 request.

22 Q. Okay. Your report concludes or
23 finds that as a percentage -- or let me
24 ask: It identifies Stephens County and
25 Rabun County as having the most closures;

1 is it per population? Is that -- is it per
2 population that they ended up being the
3 highest? I am just trying to figure out
4 what -- I understand that Stephens and
5 Rabun are the tallest on Figure 1, but is
6 that -- what made them there? Just what's
7 the analysis behind that?

8 A. Are you asking me what's being
9 plotted in Figure 1?

10 Q. Yes.

11 A. Registered voters per polling
12 place in 2014.

13 Q. All right. And so then tell me
14 what Figure 2 represents.

15 A. Figure 2 is also a bar plot. It
16 shows percentages of polling places closed
17 2014 and 2018. Each bar is a county.

18 Q. Okay. Now, there it looks like
19 there are about four counties that closed a
20 hundred percent, but they would still have
21 some polling location because -- isn't that
22 correct? And I am sorry. That was in
23 reference to Figure 2.

24 A. That is correct.

25 Q. Okay.

1 A. Excuse me?

2 Q. I just said "Um."

3 A. Oh, sorry. So I was going to
4 note that on page or -- sorry -- on
5 paragraph 114, I point out that in the
6 middle -- I will just read this. "This
7 does not mean, of course, that voters in
8 these counties had nowhere to vote on
9 Election Day 2018."

10 Q. I see. Okay.

11 So Stephens -- going back to
12 paragraph 112, the importance of Stephens
13 and Rabun County is what?

14 MR. CREELAN: Objection to form.

15 THE WITNESS: I am simply noting
16 that those are the two highest bars on
17 the figure.

18 Q. Okay. And that means they have
19 the fewest polling locations per
20 population; is that correct?

21 A. Fewest number of registered
22 voters per polling place in 2014.

23 MR. BELINFANTE: Okay. I show
24 you what we will mark as Exhibit 11.

25 (Defendant's Exhibit 11, census

1 analysis of Rabun County and Stephens
2 County, marked for Identification.)

3 Q. This is a -- 11 is a census
4 analysis of Rabun County and Stephens
5 County, both of which are in North Georgia,
6 and would you agree with me that the census
7 shows the populations of those counties
8 being, for Rabun 94.9 percent white and for
9 Stephens 85 percent white?

10 A. Yes. I believe you are reading
11 from the row that says, "white alone
12 percent" and you just read those two
13 percentages to me. I concur with those
14 percentages. They are -- I concur that
15 they are on this document.

16 Q. Great. And if you look at
17 Exhibit 9, which is the 2010 Georgia
18 profile exhibit, it shows that, at least in
19 2010, the state race breakdown in Georgia
20 was 59.7 percent white. Do you see that?

21 A. I believe you are reading from
22 this pie chart in the upper right?

23 Q. That's correct.

24 A. I see the number 59.7. Yes.

25 Q. Okay. So based on census data,

1 Stephens County and Rabun County are more
2 white than the average Georgia population
3 by a significant amount; isn't that
4 correct?

5 MR. CREELAN: Objection as to
6 form.

7 I am sorry. For clarification,
8 the Exhibit 11, is this drawn -- is it
9 as of a certain date or --

10 MR. BELINFANTE: It's population
11 estimates as of July 1, 2019 estimates
12 and 9 is admittedly 2010 census data.

13 MR. CREELAN: Thank you.

14 Q. So my question is: Would you
15 agree with me that, at least as of 2019's
16 population estimates, both Stephens County
17 and Rabun County are significantly more
18 white than the average Georgia population
19 in the 2010 census profile?

20 A. I don't want to use the adjective
21 "significant," but I will agree with you
22 that 94.9 and 85.0 are greater than 59.7.

23 Q. Why would you not use the word
24 "significant" there?

25 A. Because I am not sure what you

Michael C. Herron, Ph.D. - February 26, 2020

116

1 mean by it.

2 Q. Okay. When you talk about in
3 your report polling locations having a
4 disproportionate effect on Black voters in
5 Georgia, what do you mean by that? What is
6 the analysis being conducted? What are you
7 comparing to determine there is a
8 disproportionate effect on Black voters in
9 Georgia?

10 MR. CREELAN: Objection as to
11 form.

12 THE WITNESS: Can you show me
13 which analysis you mean in particular?

14 Q. Well, I guess my question goes
15 more to what you mean by -- is it fair to
16 say that when you are looking at a
17 disproportionate effect, you are not
18 looking at the aggregate population; you
19 are looking at the population within either
20 the White community or the Black community
21 for the purposes of this report; is that
22 accurate?

23 MR. CREELAN: Objection as to
24 form.

25 THE WITNESS: I would say there

1 are places in my report where I do
2 that, and there are also some places
3 where I look overall at Georgia.

4 (Defendant's Exhibit 12, map,
5 marked for Identification.)

6 Q. Let's look at Figure 3. For
7 Figure 3, I am going to show you what we
8 marked as Exhibit 12, which is a map that
9 includes Georgia's counties. Did you
10 prepare Figure 3?

11 A. I did.

12 Q. Okay. I will tell you, I have
13 gone through, and I did not mark on yours,
14 but I have gone through and tried to
15 identify the counties which are the darkest
16 in Figure 3, and I give you that map so you
17 can have a reference to it so you have the
18 names of them.

19 You say in the note on page 46
20 that, "Counties shading proportional to
21 percentage of precincts closed." By that
22 did you mean polling locations closed?

23 A. Yes. I apologize. I do not know
24 how that note didn't escape my attention,
25 along with the caption for this figure.

Michael C. Herron, Ph.D. - February 26, 2020

118

1 Those are polling places.

2 Q. Okay. Yes. I read it that way,
3 so it's fine.

4 Would it mean anything from an
5 analytical statistical perspective if the
6 majority of the counties that are shaded
7 the darkest have a majority White
8 population?

9 MR. CREELAN: Objection as to
10 form.

11 THE WITNESS: Not necessarily,
12 and it's because counties vary in
13 population size.

14 Q. Okay. And in trying -- so your
15 analysis looks statewide, not county by
16 county; is that right?

17 A. There are times in my report
18 where I look statewide, and there are some
19 places where I discuss individual counties,
20 usually because I am interested in showing
21 the variability across Georgia. And in
22 fact, that was the purpose of this map,
23 too.

24 Q. Okay. And what was the -- why is
25 it relevant to show variability across

1 counties or meaningful as opposed to
2 relevant?

3 MR. CREELAN: Objection as to
4 form.

5 THE WITNESS: I think this speaks
6 to questions about disparate effect of
7 election administration, not
8 necessarily about race, per se.

9 A lot of my research touches on
10 questions of how changes in procedures
11 or laws relate to voting rights and
12 other aspects of election
13 administration; and often, but not
14 always, questions of whether the
15 consequences of rule changes are
16 uniform in a jurisdiction, states, come
17 up. The questions about whether they
18 affect -- so uniformity can be a
19 question about racial groups. They
20 could also be geographical, and so
21 since I normally would comment on that
22 in my academic work, I just made this
23 map here, which I believe shows the
24 nonuniformity across the state, across
25 Georgia in this instance, of polling

1 place closures.

2 Q. And then in looking to determine
3 whether polling place closures in Georgia
4 have a disproportionate effect on Black
5 voters, what relevance would it be, you
6 know, in looking at it from a
7 county-by-county analysis or perspective?
8 Sorry.

9 A. Counties are a unit that
10 sometimes people look for to study
11 variability in election administration. I
12 would say the premise of your question is,
13 if I understood it -- actually, could you
14 reread the question so I am clear?

15 (Record read.)

16 THE WITNESS: I would not argue
17 that it's necessarily relevant. I
18 think it -- there are instances that
19 people who are interested in election
20 administration focus on counties, and
21 so I did some county analysis, as you
22 know, in my affidavits.

23 Q. Uh-huh.

24 A. But the main questions that I
25 engage in my -- in this report do not

1 depend at all on county borders.

2 Q. Okay. Could you turn to Figure 4
3 on page 48 of your report, and tell me --
4 just explain what that graph represents.

5 A. So this graph represents the
6 number of polling places by county, and I
7 made this graph because I wanted to check
8 to see if registered voters per polling
9 place changed between '14 and '18. It was
10 pretty clear to me that it probably did,
11 given that many polling places closed, but
12 I thought it was worth confirming that.

13 And this shows that across most
14 of Georgia, the counties -- these are
15 dots -- they are clustered around this 45
16 degree line, but there's some places where
17 it's greater and a few where it's lower.

18 Q. And if it's greater than the 45
19 degree line, that -- on the Y axis, that
20 means that there are more registered voters
21 per polling place there versus the
22 45-degree line, am I describing that
23 correctly?

24 A. Close.

25 Q. How would you describe it?

1 A. If it's above, that means there
2 are more -- excuse me -- if a point is
3 above the 45-degree line, then that means
4 that the associated county had more
5 registered voters per polling place in 2018
6 than it did in 2014.

7 Q. I see. Okay. So conceivably,
8 though, that could be done by county growth
9 if they did not change the voting location
10 number at all; is that right?

11 MR. CREELAN: Objection as to
12 form.

13 THE WITNESS: Could you --

14 Q. Yeah. Let me try to rephrase it.
15 So let's take a look, for example, at your
16 map. You have got several counties there
17 where it's all White, which I presume means
18 there were no polling location closures.
19 Is that what that means on the Figure 3?

20 A. Effectively. There are,
21 obviously, gradations in white, but I will
22 accept what you mean.

23 Q. So if -- let's take one of those
24 counties as white, I will pick on Laurens
25 County in the middle of the state because

1 it's big, easy to locate. If Laurens
2 County experienced a population growth, but
3 we know that it did not change the polling
4 location number, it could be above the
5 45-degree line without any changing to the
6 polling locations, correct? And by north
7 of the 45-degree line, I am referring to
8 Figure 4. Sorry.

9 A. If the county had more registered
10 -- when you said "growth," if there were
11 growth in registered voters, that is
12 possible.

13 Q. Yes. Okay. And so we can't tell
14 from that Figure 4, necessarily, if there
15 are closures. We can draw an implication
16 from it, but it's not something directly
17 shown on the graph that is Figure 4; is
18 that accurate?

19 A. I am not sure what you are asking
20 me.

21 Q. Okay. Figure 4 -- never mind.

22 All right. Let's look at
23 Table 2, which is on page 50. Can you
24 explain to me your -- sitting here today,
25 what Table 2 represents?

Michael C. Herron, Ph.D. - February 26, 2020

124

1 A. Yes.

2 Q. Please do.

3 A. This table reports results from
4 an analysis that looks at polling place
5 closures and racially homogeneous census
6 block groups.

7 Q. And so we are clear, on page 125
8 is where you identify the number of racial
9 homogeneous block groups in Georgia?

10 A. I believe you mean paragraph 125?

11 Q. Yes. I'm sorry. Did I --

12 A. Yes.

13 Q. Okay. So in looking at those, 69
14 and 112, that's the universe of data used
15 to make Table 2; is that correct?

16 A. No.

17 Q. Okay. So what is Table 2 -- no,
18 no, no. I am sorry. That would include
19 just the 100 percent cutoff, is that right,
20 the top line?

21 A. That is correct.

22 Q. Okay. So then cutoff 95, what
23 does that represent?

24 A. That --

25 MR. CREELAN: Objection as to

1 form.

2 MR. BELINFANTE: What's that?

3 MR. CREELAN: Objection as to
4 form.

5 MR. BELINFANTE: I'm sorry.

6 Q. Cutoff 95 on Table 2, what does
7 that represent?

8 A. That represents census block
9 groups that are at least 95 percent
10 African-American or White.

11 Q. Okay. Why did you stop at 95?
12 Was there any statistical reason for that?

13 A. No.

14 Q. Okay. You just had to stop
15 somewhere?

16 A. Yes.

17 Q. And when you -- when the column
18 says "difference" over there on the far
19 right, what is that the difference between?

20 A. That's the difference between the
21 Black closure rate and the White closure
22 rate.

23 Q. So when we get to 95, the White
24 closure rate exceeds the Black closure
25 rate? Am I reading that correctly?

1 A. That is correct. That's because
2 20.36 is greater than 19.81.

3 Q. Okay. And in this analysis, when
4 you are looking at closures, if a county
5 were to, let's say, close five polling
6 locations, but open ten additional ones, so
7 there is a net gain of five, did those
8 closures still get incorporated into this
9 analysis that the five that were closed?

10 MR. CREELAN: Objection as to
11 form.

12 THE WITNESS: Yes. I -- in one
13 of the paragraphs, I don't remember
14 which one, I specify how I define a
15 closed polling place.

16 Q. Okay.

17 A. And that is a polling place whose
18 address was used in 2014 but not in 2018.

19 Q. Okay.

20 A. So the answer is -- I don't know
21 if the question was phrased positively or
22 negatively.

23 Q. I think you have answered the
24 analysis.

25 A. Okay.

Michael C. Herron, Ph.D. - February 26, 2020

127

1 MR. CREELAN: If you want, just
2 for the clarity, if you want to reread
3 the question.

4 THE WITNESS: Please.

5 MR. CREELAN: Make sure you are
6 comfortable with the answer.

7 (Record read.)

8 THE WITNESS: Thank you.
9 Obviously, the hypothetical of a county
10 is a hypothetical.

11 The answer to your question, if a
12 closed polling place is incorporated in
13 my analysis if it is closed, meaning
14 the address is not used in 2018 after
15 having been used in 2014, the answer is
16 yes.

17 Q. Okay. Do you have within the
18 data you prepared for this report the
19 counties -- or excuse me -- the census
20 blocks that are referred to in Table 2?

21 A. Yes.

22 Q. And one reading this report could
23 not tell from Table 2 alone where in
24 Georgia those census blocks are; is that
25 correct?

Michael C. Herron, Ph.D. - February 26, 2020

128

1 A. It's in the data.

2 Q. It's in the data, but not
3 reflected in your report; is that right?

4 A. I wouldn't go so far to say not
5 reflected in, but you cannot in Table 2
6 from this -- from this physical table, know
7 where -- which census blocks are included
8 outside of the fact that the cutoffs are
9 given.

10 Q. Okay. Do you reach a conclusion,
11 based on Table 2, that polling place
12 closures disproportionately affected the
13 Black population in Georgia?

14 A. Yes.

15 Q. Okay. And what is the basis of
16 that conclusion?

17 A. The basis is primarily in the top
18 line.

19 Q. Okay. And is that because 2.76
20 is simply greater than zero or is it a
21 sufficiently greater number than zero that
22 it leads you to conclude that there is a
23 disproportionate effect on Black voters?

24 MR. CREELAN: Objection as to
25 form.

1 THE WITNESS: This comes out of a
2 counting exercise, so this sort of gets
3 back to questions you were asking
4 earlier.

5 I'm not estimating this number.
6 I am simply calculating it by counting
7 individuals who -- whose polling places
8 were closed, and then I note where they
9 live.

10 So I would say that that
11 conclusion follows from the fact that
12 2.76 is greater than zero.

13 Q. I see. Okay. So you would reach
14 the same conclusion looking at the second
15 line, the 99 cutoff on Table 2; is that
16 correct? That there is a disproportionate
17 effect on Black voters?

18 A. Well, it's a slightly different
19 conclusion because the cutoff is different.

20 In the places that are a hundred
21 percent homogeneous and either
22 African-American or White, we know what
23 happened there.

24 Q. Okay.

25 A. Racially speaking, that is.

1 Q. And is the number of locations
2 that that refers to a sufficiently large
3 sample to make the statement of
4 disproportionate effect on Georgia voters
5 or are you -- let me back up.

6 Are you using the information on
7 Table 2 to reach a conclusion that there is
8 a disproportionate effect on polling
9 closures for Black Georgia voters?

10 A. I would say it contributes to
11 that conclusion.

12 Q. I see. Okay. So standing alone
13 it may not do it? Or let me -- that's not
14 a good question.

15 Standing alone, the information
16 reflected on Table 2 does not lead you to
17 conclude that there is a disproportionate
18 effect of polling closures on Black Georgia
19 voters?

20 MR. CREELAN: Objection as to
21 form.

22 THE WITNESS: I wouldn't phrase
23 it that way.

24 Q. Okay. Let's look at Table 3.
25 Can you just walk me through what Table 3

1 represents?

2 A. Yes.

3 Q. Please do.

4 A. Table 3 reports closing -- excuse
5 me -- polling place closure rates by
6 various groups for registered voters in the
7 2000 voter file, and for whom I could
8 determine race based on the 2016 and 2018
9 voter files that we discussed earlier, and
10 the column called Race contains the group
11 name; then the number of individuals who
12 are registered in that group; then the
13 number of individuals whose polling places
14 closed, based on the definition of "closed"
15 I earlier articulated, and then the
16 fraction of individuals whose polling
17 places closed.

18 Q. And do you conclude looking at
19 Table 3 alone that there is a
20 disproportionate effect of polling closures
21 on Georgia's Black registered voter
22 population versus the White registered
23 voter population?

24 MR. CREELAN: Objection as to
25 form.

1 THE WITNESS: Could you clarify
2 mean by "alone"?

3 Q. Sure. If the only point of
4 reference you have is Table 3, that's the
5 only data you are looking at, would that
6 data alone lead you to conclude that there
7 is a disproportionate effect of polling
8 location closures on Georgia's Black
9 population as opposed to the White
10 population? And by "population" I mean
11 population of registered voters.

12 A. I don't find that hypothetical
13 compelling because this is not the only
14 data that I have.

15 Q. And that's a fair criticism of
16 the question, but I am still looking for an
17 answer to the question.

18 MR. CREELAN: Do you want to
19 reread it?

20 THE WITNESS: I understand the
21 question, but I wouldn't conduct an
22 analysis that only had that.

23 Q. Okay. And I appreciate that. My
24 question is: Looking only at Table 3,
25 would you conclude that there is a

1 disproportionate effect of polling closures
2 on Black Georgia registered voters as
3 opposed to White Georgia registered voters?

4 MR. CREELAN: Objection as to
5 form. I think he answered this
6 question; that he wouldn't conduct
7 this -- he wouldn't approach it that
8 way, but you can answer if you can.

9 THE WITNESS: I wouldn't ground a
10 conclusion based solely on evidence in
11 something like Table 3, and the reason,
12 as I explained in my report, is that
13 every approach to the question about
14 racial neutrality of polling place
15 closures has advantages and
16 disadvantages; and that is why I
17 brought multiple measures to bear on
18 this question. That's called
19 triangulation, and that's a good thing
20 and -- excuse me. It's good to bring
21 multiple approaches to a single
22 question when each approach has some
23 advantages and disadvantages.

24 So I'm not comfortable saying
25 only looking at that table because, as

1 evidenced by this affidavit, I wouldn't
2 write an analysis that only had
3 Table 3.

4 Q. Okay. And, again, I appreciate
5 that.

6 I guess my question is: The
7 Black/ White difference of .12 identified
8 in Table 3, do you conclude that that is
9 evidence of a disparate impact or
10 disproportionate effect on Black voters?

11 MR. CREELAN: Objection as to
12 form.

13 THE WITNESS: And "conclude"
14 means based on -- well, what do you
15 mean by "conclude" in this context? Do
16 you mean -- please?

17 Q. I mean to reach a conclusion, to
18 review the findings, the math, and then
19 make a judgment as to whether there is a
20 disproportionate effect.

21 A. I don't believe that a single
22 analysis here -- well, I will say what I
23 said before. I would not write a report
24 like this only having access to numbers
25 like in Table 3, and that's because I know

1 that there are limitations and advantages
2 to every approach, just like in Table 3
3 analysis. And so I -- you are asking me
4 the hypothetical, what if I didn't know
5 about anything else? And I understand the
6 hypothetical, but, in fact, I do know about
7 other tables in this report.

8 Q. And I get that. I guess I am
9 just trying to determine -- you talk about
10 the yield of .12 difference. If it were
11 .08, would that change your overall
12 conclusion?

13 A. Hypothetically?

14 Q. Yes.

15 A. My report doesn't take a position
16 on what I think is a legal question, which
17 is: How big of a racial difference or
18 disparate impact is legally meaningful, so
19 I am not taking a position on that.

20 Hypothetically, if it were .8
21 rather than .12 --

22 Q. I meant .08 but --

23 A. Thank you. I would still note
24 that it's positive, and I would couch
25 Table 3 with .08 I believe, hypothetically?

Michael C. Herron, Ph.D. - February 26, 2020

136

1 Q. Yes.

2 A. I would couch that result within
3 the framework of all of the analyses in the
4 affidavit, and it's the totality of the
5 evidence in the affidavit, I believe, that
6 generates my overall conclusion.

7 Q. Okay. Let me ask you a question,
8 and I am going to try to phrase this
9 precisely.

10 It's evident from the numbers in
11 Table 3 that more White Georgia voters
12 experienced a polling closure than Black
13 Georgia voters, correct?

14 A. Because 564,248 is greater than
15 301,291.

16 Q. Yes.

17 A. That is correct.

18 Q. Okay. So why then would -- could
19 you -- let me ask this way: Could you
20 reach a conclusion that polling closures in
21 Georgia disproportionately affected White
22 voters because more of them were subject to
23 polling closure than Black voters?

24 MR. CREELAN: Objection as to
25 form.

1 THE WITNESS: I wouldn't draw
2 such a conclusion because the number of
3 White registered voters and the number
4 of Black registered voters is
5 different.

6 Q. And so --

7 A. Excuse me. Are different.

8 Q. Let's look at Table 4. What does
9 Table 4 show?

10 A. Table 4 presents results of an
11 analysis that looks at the Black majority
12 status of individuals who are assigned to
13 given polling locations based on a
14 50 percent cutoff, which I believe is noted
15 in paragraph 136 where I mentioned -- used
16 the word "majority."

17 Each polling place either has the
18 Black majority or it doesn't. That's a no
19 or yes, respectively, and each polling
20 place is either closed or not.

21 Q. Okay.

22 A. Hence, the "no and yes" under the
23 Closed column, and then the Count column
24 provides the counts of each type of polling
25 place.

1 Q. And I was with you up until the
2 count provides the type of each polling
3 place. Can you explain that again? I am
4 sorry.

5 A. Excuse me. The Count provides
6 the -- the Count column provides the number
7 of each type of polling place.

8 Q. Okay. So top line is non-Black
9 majority polling locations where there was
10 not a closure, and that number is 1,625; is
11 that accurate?

12 A. That is correct.

13 Q. Okay. And when you go to
14 Table 5, is that -- that examines Black
15 supermajority polling locations? Oh, no.
16 I am sorry. That's Table 6.

17 So Table 5, how is that different
18 from Table 4?

19 A. Table 5 collapses the information
20 in Table 4 and reports closure rates.

21 Q. Okay. All right.

22 And then Table 6 is the one that
23 looks at supermajorities, which is, I
24 believe, defined as 60 percent or higher of
25 Black population in paragraph 141; is that

1 right?

2 A. That is correct.

3 Q. Okay. And this analysis, too,
4 does not take into account -- "this
5 analysis" being Tables 4, 5 and 6 --
6 geography in the sense of which counties --
7 I mean, this just doesn't consider which
8 counties closed polling locations. It's
9 just looking at the aggregate number of
10 polling locations that meet the definitions
11 that you've proscribed, either majority
12 Black or super- majority Black?

13 MR. CREELAN: Objection as to
14 form.

15 THE WITNESS: Could you rephrase
16 that?

17 Q. Yeah. There is probably a better
18 way to do it.

19 Tables 4, 5 and 6 are looking at
20 the aggregate numbers across the state of
21 majority or supermajority Black polling
22 locations; is that correct?

23 A. That is correct.

24 Q. Okay. All right. Let's look at
25 Table 7. Would you explain to me what

1 Table 7 represents?

2 A. I will read from paragraph 146 of
3 page 58. "Table 7 describes the racial
4 breakdown of 5,245,862 registered voters
5 who appear in the 2014 and 2018 Georgia
6 voter files and who have valid 2018 race
7 codes."

8 So what this table describes for
9 various groups under the column Race, the
10 number of individuals in them, and the
11 percentages, so -- which sum to 100,
12 subject to potential rounding.

13 Q. So it's voters on the 2018 voter
14 file who also appeared on the 2014 voter
15 file?

16 A. It's individuals who appear in
17 both voter files, and they were valid 2018,
18 yes, valid race codes. 2018 race codes.

19 Q. All right. And so then Table 8,
20 can you explain to me what Table 8
21 represents?

22 A. It's the same as Table 7, except
23 it drops people who are non-movers. Excuse
24 me. It drops people who are movers. It
25 includes only non-movers.

1 Q. All right. So in other words,
2 it's the persons with the same address on
3 the 2014 voter file as on the 2018 voter
4 file; is that correct?

5 A. That is how I defined non-moving
6 status.

7 Q. Okay. And just, again, this is
8 largely for the record, but of that
9 non-moving population, White voters
10 represented 60.08 percent of them. Is that
11 what Table 7 -- or excuse me -- Table 8
12 reflects?

13 A. Of the non-moving voter --
14 registered voters who appear in both 2014
15 and 2018 Georgia voter files, Whites make
16 up 60.8 percent. I believe the answer is
17 then yes.

18 Q. All right. You say in
19 paragraph 149 that the numbers in
20 this first sentence, "The numbers in
21 percentages at Table 8 show that focusing
22 on non-movers in Georgia between 2014 and
23 2018 leads to a disproportionately more
24 White and disproportionately less Black set
25 of registrants."

Michael C. Herron, Ph.D. - February 26, 2020

142

1 What do you mean by that?

2 A. Could you show me the paragraph
3 that you are referring to?

4 Q. Yes. It's paragraph 149, which
5 begins on page 59 of your report.

6 A. Ah, thank you. What I am
7 referring to is the fact that when you
8 compare Tables 7 and 8, when you look --
9 again, the difference is that Table 8
10 includes everyone in Table 7 except for
11 movers. So it restricts the set of
12 individuals that when you do that
13 restriction, in other words, when you get
14 rid of people who move, the fraction of
15 White goes from 57, approximately
16 57 percent, to approximately 60 percent.
17 That number is up.

18 Q. Okay.

19 A. The percentage of Black goes from
20 approximately 30 percent to approximately
21 28 percent. That fraction is down.

22 And so what that means is when
23 you focus attention on non-movers, you get
24 disproportionately more Whites and fewer
25 African-

1 Americans.

2 Q. Okay. Paragraph 150, as I read
3 the first sentence -- well, let me -- what
4 does 18 percent, as referenced in the first
5 sentence of paragraph 150, represent?

6 MR. CREELAN: Objection as to
7 form.

8 THE WITNESS: It represents the
9 fraction of individuals who were
10 assigned new polling places --

11 Q. Okay.

12 A. -- statewide.

13 Q. Statewide. So 18 percent of
14 Georgians, sometime between 2014 and 2018,
15 were assigned new polling locations?

16 MR. CREELAN: Objection as to
17 form.

18 THE WITNESS: Yes. The second
19 sentence of paragraph 150 says -- this
20 I will just read. "This covers
21 non-moving registered voters whose
22 polling place were closed and also
23 those whose polling place" -- excuse
24 me -- "were closed between 2014 and
25 2018, and also those whose polling

Michael C. Herron, Ph.D. - February 26, 2020

144

1 places were not closed yet were
2 nonetheless assigned to new such
3 places."

4 So it includes only non-movers.

5 Q. All right. Can you explain for
6 me, presuming you can, please do Table 9?

7 MR. CREELAN: And just one thing,
8 when you are reading text, for the
9 benefit of the court reporter, just
10 slow down a bit so she can get it.

11 THE WITNESS: Sorry.

12 MR. CREELAN: That's okay.

13 THE WITNESS: Yes. So I will
14 explain. Of individuals who received
15 new polling places, 59.37 -- I will go
16 with approximately 59 percent --

17 Q. Sure.

18 A. -- were White.

19 Of the people who did not receive
20 new polling places, approximately
21 60 percent were White.

22 Of the people who received new
23 polling places, approximately 20 -- we will
24 say 29 percent, I am rounding here -- are
25 African-American. Approximately 28 -- of

1 the people who did not meet -- receive new
2 polling places, approximately 28 percent
3 are African-
4 American, and then similarly for other
5 races.

6 Q. Okay. What does this table show
7 you? What is the takeaway from Table 9?

8 A. It shows you that there are --
9 you can divide non-moving registered voters
10 who appear in both the 2014 and '18 voter
11 files into two groups: Individuals who
12 received new polling places, and
13 individuals who didn't.

14 Among the people who did receive
15 new polling places, they are 59 percent
16 White. Okay.

17 What it shows is that the people
18 who did not receive new polling places were
19 more White and because 60 is bigger than
20 59, and less Black because 28.23 is less
21 than 28.85.

22 Q. Okay. And you are not -- you are
23 not opining on whether the difference here,
24 the .89 on the top line and negative .62 is
25 significant in and of itself; is that

1 correct?

2 MR. CREELAN: Objection as to
3 form.

4 THE WITNESS: This is a counting
5 exercise. I am reporting that of the
6 new polling place individuals,
7 59.3 percent, 59.37 percent were White.
8 Of the not new polling place
9 individuals, 60.26 are White, and the
10 difference between those two fractions
11 is .89. That's just -- that's
12 literally just counting.

13 Q. Sure.

14 A. And then I similarly did the same
15 counting exercise looking at new polling
16 place individuals and not new polling place
17 individuals, focusing on African-Americans,
18 and you get a difference of minus
19 .62 percent.

20 Q. And as with prior tables, I think
21 it was for some of the other ones we
22 discussed, you would not make a conclusion
23 on whether polling closures in Georgia
24 disproportionately affect African-American
25 voters looking only at Table 9; is that

1 correct?

2 MR. CREELAN: Objection as to
3 form.

4 THE WITNESS: What I said is that
5 I wouldn't conduct an analysis that
6 only has, in this case, Table 9.

7 Q. Okay. And my question is:
8 Looking only at Table 9, do you believe you
9 would have sufficient evidence to make a
10 conclusion one way or the other as to
11 whether polling closures in the state of
12 Georgia disproportionately affected Black
13 voters?

14 MR. CREELAN: Objection.

15 THE WITNESS: What I had said
16 when we discussed this issue before, is
17 that every approach to this question
18 has advantages and disadvantages; and I
19 am cognizant of that, and I think I
20 should be open to that fact, and so
21 that pushes me in the direction of
22 offering several different looks,
23 several different approaches to the
24 question that I am trying to address in
25 this report.

1 This is one of those approaches.
2 What I have emphasized is that I would
3 not write a report that only had
4 Table 9 in it independently of the
5 numbers because I don't think that --
6 any individual approach has pluses and
7 minuses and, therefore, one should not,
8 when in that situation, rely on only
9 one approach.

10 This is what I mentioned before.
11 It's called triangulation, and that's
12 exemplified in the fact that I brought
13 several different approaches to the
14 question about racial differences in
15 polling place closures in Georgia.

16 Q. Could you turn to Figure 5, which
17 is on page 63? Can you explain, and please
18 do, what Figure 5 represents?

19 A. Yes. Figure 5 is similar to the
20 other map of Georgia in that it breaks down
21 the state by county boundaries and reports
22 fractions of individuals who fit certain
23 features.

24 I spoke that poorly. Excuse me.
25 It reports fraction of non-movers with new

1 polling places in 2018 compared to 2014.

2 Q. Okay. And if I am reading this
3 right, and you can refer to the map that's
4 in front of you, it's Exhibit 12, the map
5 of Georgia, looking on the southwest corner
6 of the state, the most north of that area,
7 county, appears to be Stewart County, just
8 comparing the two. Would you agree?

9 MR. CREELAN: Objection as to
10 form.

11 THE WITNESS: I'm not sure where
12 we are looking. I apologize.

13 Q. Okay. That's fine.

14 A. Could you point?

15 Q. I can, actually. Yes. So the
16 county that's shaded black right here?

17 (Indicating.)

18 A. Here?

19 Q. Yes.

20 A. Thank you. Yes.

21 Q. Okay. So what that's referring
22 to is, in Stewart County, as compared to
23 other places in Georgia, the number of
24 registered voters who received a new
25 polling place between 2014 and 2018 is

1 among the highest. Is that how I should
2 read this?

3 A. Non-moving registered voters,
4 correct.

5 Q. Okay. So let me ask you to go
6 back to the Democracy Diverted report, and
7 specifically to page 63.

8 And there -- and I understand you
9 are not attesting to the veracity of the
10 Democracy Diverted report -- but there, as
11 I read it, Stewart County had no polling
12 locations changed?

13 A. That's -- excuse me.

14 Q. Go ahead. That's what it
15 reflects?

16 A. Could you ask that question,
17 please?

18 Q. Sure. Does the Democracy
19 Diverted report, which is Exhibit 8, on
20 page 63 reflect that Stewart County did not
21 have any polling location changes between
22 looks like 2012 and 2018?

23 A. My reading of this under the
24 column change -- number changed and
25 percentage changed both are zero.

1 Q. Right.

2 A. For Stewart County, that's
3 correct.

4 Q. Okay. So if -- and I realize
5 that you have to -- this is a hypothetical,
6 but if the Democracy Diverted evidence is
7 accurate, and your evidence is accurate,
8 what could explain what's going on in
9 Stewart County?

10 A. Well, I cannot testify to the
11 accuracy of what Democracy Diverted did.

12 Q. Correct.

13 A. I can tell you that Figure 5 also
14 includes people who received new polling
15 places independently of closures.

16 Q. Okay.

17 A. So I do not know if that's what
18 explains this result.

19 Q. Got it. Okay.

20 And really that's because there
21 are, at least potentially, different
22 impacts between polling location closures
23 and polling location changes?

24 MR. CREELAN: Objection as to
25 form.

1 Q. Or let me ask you this: Does
2 your report reach a conclusion on whether
3 there is a meaningful difference between
4 polling location closures versus polling
5 location changes?

6 MR. CREELAN: Objection as to
7 form.

8 THE WITNESS: Could you rephrase
9 that question or -- I apologize. Could
10 you repeat the question?

11 (Record read.)

12 THE WITNESS: Could you explain
13 what "meaningful difference" means?

14 Q. Statistically relevant.

15 MR. CREELAN: Objection. Same
16 objection.

17 THE WITNESS: Again, this is a
18 counting exercise. My report looks at
19 closures, and then it combined groups
20 of individuals who have new polling
21 places in '18 compared to '14. The
22 numbers aren't the same. So I guess
23 that leads me to tell you that they are
24 different.

25 MR. BELINFANTE: Could you --

1 actually at this point, and I hate to
2 do this, but because of the Internet, I
3 just saw I got a couple messages. It's
4 been about an hour. Can we take a
5 ten-minute break?

6 MR. CREELAN: Sure. Yes.
7 Ten-minute break.

8 (Break taken.)

9 Q. Could I draw your attention to
10 Figure 6? I believe that was where we left
11 off. I realize it will be tough to read,
12 but if you could get a document like that
13 that has the counties that are -- because
14 those are counties on the X axis, correct?

15 A. That is correct.

16 Q. Okay. So you could get
17 information that shows which counties are
18 reflected in each of those bars?

19 A. Subject to readability,
20 absolutely.

21 Q. Okay. And at worst, it would be
22 on an Excel spreadsheet, which would make
23 it very readable, right?

24 A. This is not from Excel, but I --
25 hypothetically, you could make an Excel

1 spreadsheet that has this information.

2 Q. All right. Thank you.

3 We were going back and forth a
4 minute ago about Stephens County, and I
5 want to just for, in fairness, to draw your
6 attention to Figure 3 on page 46. I was
7 asking you based on the Democracy Diverted
8 study, but you actually did this yourself.
9 Figure 3 is on page 46. And if you look
10 there, that same county, Stephens County,
11 appears to be all White, which means there
12 are no polling closures, and then when you
13 fast forward to 63, Figure 5, it is all
14 Black, which would indicate that there are
15 many new polling places there.

16 MR. CREELAN: Objection to form.

17 Q. Is that what Figure 5 shows? Or
18 that a large number of registered voters
19 had a new polling place?

20 A. Yes.

21 Q. Okay. So that's consistent with
22 the Democracy Diverted, and again, I
23 understand you're not taking a position on
24 the accuracy of Democracy Diverted, but I
25 did want to at least draw your attention to

1 that you had done the same study in terms
2 of polling location closures and reached
3 the same conclusion that in Stephens
4 County, at least -- sorry, Stewart
5 County -- not Stephens -- Stewart County,
6 there were no to low polling location
7 closures?

8 MR. CREELAN: Objection.

9 MR. BELINFANTE: Is that correct?

10 THE WITNESS: That was a long --

11 Q. Okay. Let me do it this way:
12 Figure 3 would show that in Stewart County
13 the number of polling locations that closed
14 between 2014 and 2018 appears to be zero or
15 certainly low; is that correct?

16 A. That is correct based on Figure 3
17 on page 46.

18 Q. Okay. But then when you look at
19 Figure 5 on page 63, the number of
20 registered voters who had a new polling
21 place between 2018 and 2014 is high in
22 Stewart County, non-moving registered
23 voters; is that correct?

24 A. Non-moving who are in both voter
25 files, correct.

1 Q. Yes. Okay.

2 But we don't know why -- but the
3 report does not explain how that phenomenon
4 could have occurred in Stewart County,
5 correct?

6 A. I offered an explanation, but I
7 haven't looked at -- particularly at that
8 county.

9 Q. Okay. Can you explain for me,
10 and if you can, please do, what Figure 7 on
11 page 67 represents?

12 A. Figure 7 shows 159 circles, each
13 of which is associated with a county, and
14 it shows on the X axis the fraction of
15 African-American voters who have new
16 polling places. It says precincts. That's
17 incorrect. It should say "polling places."
18 Same for the Y axis, except that's White
19 registered voters, and there is a 45-degree
20 line in this figure like in other figures.

21 Q. Uh-huh.

22 A. So a county whose point -- excuse
23 me -- is on this line at the same number of
24 non-moving Black registered voters who were
25 new polling locations the same percentage,

1 excuse me, of non-moving Black registered
2 voters who had new polling places as
3 compared to the percent of non- moving
4 White registered voters with new polling
5 places.

6 Q. Okay. So let's take, for
7 example, Hall County, which is on the Y
8 axis just about at 25. Do you see it
9 there?

10 A. I see Hall County.

11 Q. Okay. The size of the circle --
12 and you explained this in your report --
13 reflects the population, voting population
14 in Hall County; is that right?

15 A. The number of registered voters
16 in 2008.

17 Q. Okay.

18 A. Excuse me. '18.

19 Q. '18. And before that, is that
20 registered voters in 2018 non-moving or
21 just registered voters in 2018?

22 A. Registered voters in 2018.

23 Q. Okay. So Hall is above the
24 45-degree line. So what does that tell
25 you?

1 A. That tells you that in Hall
2 County, among the non-moving White
3 registered voters, excuse me, among
4 non-moving registered voters -- okay. Let
5 me say this one more time.

6 Q. Sure.

7 A. That point being above the
8 45-degree line means that the fraction of
9 White registered voters, non-moving
10 registered voters who received new polling
11 places is greater than the fraction Black
12 of non-moving Black registered voters.

13 Q. Okay. And so just looking at the
14 graph, we have, by contrast, Fulton County,
15 which is somewhere around the 35 on the X
16 axis. Do you see it there?

17 A. I see Fulton County.

18 Q. The large circle?

19 A. Yes.

20 Q. So what we are seeing in Fulton
21 County is that the percentage of Black
22 voters with a new polling location was
23 greater than the percentage of White voters
24 in Fulton County with a new polling
25 location. Am I reading that, correct?

1 A. Effectively, yes.

2 Q. Okay. And so the counties, then,
3 that are below the 45-degree line all had
4 more Black voters with new polling
5 locations, and those that are above the
6 45-degree line had more White voters as a
7 percentage with new polling locations?

8 MR. CREELAN: Objection as to
9 form.

10 THE WITNESS: Yes. All the
11 percentages are normalized by Black and
12 White registered voters on this.

13 Q. Okay. All right. So and that is
14 -- and when I go back to Table 9 on
15 page 61, that's a statewide percent number
16 that's not broken out by county, which is
17 what is reflected on Figure 7; is that a
18 fair way to compare those two?

19 A. I would -- excuse me.

20 Q. Well, just for the record,
21 comparing Table 9 to Figure 7.

22 A. Table 9 is statewide. Figure 7
23 is not statewide.

24 Q. And Table 9 looks to percentages
25 of voters with new polling locations and

Michael C. Herron, Ph.D. - February 26, 2020

160

1 not new polling locations, correct?

2 MR. CREELAN: Objection as to
3 form.

4 THE WITNESS: Well, I --
5 Table 9 --

6 Q. Go ahead.

7 A. If I would read the caption, the
8 distribution of race and new polling place
9 status among non-moving registered voters
10 in both the 2014 and 2018 Georgia voter
11 files.

12 So it's statewide, and it
13 describes two different groups of
14 individuals: Individuals who received new
15 polling places, individuals who didn't, and
16 then it breaks those down by race group.

17 Q. Okay. And it's -- and it's by
18 percentage of those voters, correct? So,
19 in other words, the 59.37 is 59.37 of White
20 voters in the 2018 election at a new
21 polling location?

22 A. No.

23 Q. Okay. Then explain what's going
24 on.

25 A. Of the individuals who received

1 new polling places --

2 Q. Yes, that's right.

3 A. -- 59.3 percent is White.

4 Q. Okay. Got it.

5 And so I think what I was asking

6 you was more reflected in Table 10. Can

7 you just explain to me what Table 10

8 represents?

9 A. Can you tell me the page, please?

10 Q. Yes. Page 69.

11 A. Are we on page 69?

12 Q. Yes. Table 10.

13 A. And you are asking me what this

14 explains?

15 Q. Yes.

16 A. Thank you. Table 10 reports
17 turnout rates in the 2018 general election
18 broken down in several different ways: By
19 racial group, as you can see the label on
20 the left, and by whether an individual has
21 a new polling place or not.

22 Q. Okay. What is the 2014 Voters
23 column represented in Table 10?

24 A. The number of -- let me confirm.

25 Okay. I am ready.

1 Q. Okay.

2 A. This says -- and I will just read
3 page -- excuse me -- paragraph 169. What
4 that top row says, I will just read this.
5 "According to this row, of the
6 approximately 2.1 million non-moving White
7 registered voters in 2014 who were also
8 registered in 2018, approximately
9 67 percent of those who received new
10 polling places between 2014 and '18 turned
11 to out to vote in 2018."

12 Q. So what does the 2014 Voters
13 column represent?

14 A. Numbers of registered voters.

15 Q. Is that people that are
16 registered in both 2014 and 2018?

17 A. Yes. Because I -- under
18 paragraph 169, it said you have to be --
19 who are also registered in 2018. Yes.

20 Q. Okay. And in reading 168, I took
21 Table 10 to include only non-movers; is
22 that accurate?

23 A. Yes. That is accurate. Also
24 noted in 169.

25 Q. Okay. So the number of White

1 persons listed there, 2,172,086, that means
2 that in 2018 of White voters that turned
3 out, 2,172,086 of them were registered at
4 the same address in 2014 and 2018. Am I
5 reading that correctly?

6 A. I don't -- I cannot tell what you
7 are saying.

8 Q. Okay. All right.

9 What is the 2.1 million White in
10 the 2014 column? What population is that?

11 A. There were 2,172,086 White
12 individuals who didn't move and were
13 registered in both 2014 and in 2018.

14 Q. Got it. Okay.

15 A. And there may be some slippage
16 because of missing race codes, as we have
17 talked about, on the margins.

18 Q. Sure. On the margins.

19 A. These are very small numbers.

20 Q. And when you talk about turnout
21 in Table 10, does that include Election Day
22 turnout as well as any other form of
23 turnout? In other words, start over.
24 Forget I even asked that question.

25 When you talk about turnout in

1 Table 10, is that votes cast?

2 A. Turnout overall.

3 Q. Overall. So that would include
4 write-in ballots?

5 A. Turnout means if someone showed
6 up to vote.

7 Q. Okay. And that's my question.
8 When I mean write-in ballot, I meant
9 mail-in absentee ballot, not write-in
10 candidates; somebody who mailed in a ballot
11 would be included in that top line, a White
12 person who did a mail-in ballot in 2018
13 would be included in that top line,
14 correct?

15 A. Correct. Turnout means the
16 person cast a ballot.

17 Q. Got it. Okay.

18 So then can you explain to me
19 what Table 11 represents?

20 A. Yes.

21 Q. Okay. Can you please do that?

22 A. So Table 11 takes Table 10 and
23 restricts attention to individuals who
24 voted in the 2014 General Election.

25 Q. Uh-huh.

1 A. So in that table 2014 Voters
2 means individuals who were registered to
3 vote and voted in 2014.

4 Q. All right. So if I am
5 understanding this, Table 11 shows someone
6 who voted in both 2014 and 2018 and did not
7 move, and Table 10 shows someone was
8 registered in 2014 and voted in 2018, but
9 did not move?

10 MR. CREELAN: Objection as to
11 form.

12 THE WITNESS: I don't believe the
13 first characterization was correct.

14 Q. Okay. So tell me -- and I'm
15 sorry to make you repeat it. Tell me again
16 what Table 11 represents.

17 A. Table 11 covers the individuals
18 who are in Table 10 as long as they voted
19 in 2014.

20 Q. Okay. So someone could be on
21 Table 10 and not have voted in 2014; they
22 just had to be registered in 2014; is that
23 accurate?

24 A. That is correct.

25 Q. And they had to not move between

1 2014 and 2018?

2 A. That is correct.

3 Q. Okay. Is there an analysis that
4 you did that looked at voters -- I guess
5 let's take Table 11 -- who voted in both
6 2014 and 2018 overall? Is there -- was
7 that analysis conducted?

8 MR. CREELAN: Objection as to
9 form.

10 MR. BELINFANTE: Or was it
11 limited to non-movers?

12 MR. CREELAN: Objection as to
13 form.

14 THE WITNESS: In Table 11 I am
15 interested in understanding how people
16 turned out or didn't as a function of
17 whether they received new polling
18 places or not.

19 Q. Sure.

20 A. And since individuals who move
21 will often, by virtue of moving, receive
22 new polling places, I excluded them from
23 that analysis.

24 Q. Okay. Could your analysis -- or
25 did you have data to run an analysis on

1 overall individuals who voted in the 2014
2 and the 2018 election regardless of whether
3 they moved?

4 A. I have the data, but I didn't
5 look at that sort of analysis because I am
6 interested in studying how people behaved
7 in 2018 as a function of whether or not
8 they received a new polling place.

9 Q. Okay.

10 A. And if I include movers in that
11 group, I will end up with a
12 received-new-polling-place variable that is
13 a -- that includes new polling places
14 because they were assigned that way by an
15 election official and new polling places
16 due to moving, and those, I would say, are
17 fundamentally different, and I wouldn't
18 want to combine them.

19 Q. Hypothetically, looking at
20 Table 11, what would it mean to you if
21 there were 500 -- well, never mind. I am
22 going to ask you a question.

23 And so let's go back to Table 11.
24 The column that says 2014 Voters, we have
25 talked about that. What does the New Place

1 and Not New Place number represent, those
2 columns?

3 A. Those are the turnout rates for
4 individuals in any particular group. So,
5 for example, 87.44 percent of White
6 non-moving registered voters who did vote
7 in 2014 and were in both the 2014 and '18
8 voter files voted as well in the 2018
9 General.

10 Q. Okay. And then Table 12 looks at
11 persons who voted on Election Day only; is
12 that accurate?

13 A. I would say Table 12 is slightly
14 broader than what you are saying, but
15 that's the basic idea.

16 Q. And the number there, we went
17 through this exercise with the other ones,
18 the 2,172,086 persons identified as 2014
19 voters, that's the same, I believe, as in
20 Table 10. So that's persons who were
21 registered in 2014 and voted in at least
22 2018; is that correct?

23 MR. CREELAN: Objection as to
24 form.

25 THE WITNESS: They were people

1 who were registered in 2014.

2 Q. Yes. And voted in 2018?

3 A. Not necessarily.

4 Q. Not necessarily. Okay.

5 So -- okay. So I think I

6 understand. Sorry for being dense.

7 The 2014 -- what this represents is that in

8 2014, there were 2.1 million White voters

9 registered to vote. By 2018, 26.5 percent

10 of them had a new polling location? No,

11 no, no. That's not what that represents.

12 What does --

13 So of that percentage, tell me

14 what the -- of that number of electors,

15 what is the 26.57 new places? What does

16 that represent?

17 A. That represents the percentage of

18 White -- of non-moving White registered

19 voters who were in both the 2014 and 2018

20 voter files, the percentage of voting on

21 Election Day --

22 Q. Got it.

23 A. -- in 2018.

24 Q. Okay. And Table 13, and walk me

25 through just the top line there.

1 A. Table 13 is analogous to Table 12
2 except it restricts attention to people who
3 actually voted in 2014.

4 Q. Okay. And by necessity then, who
5 also voted in 2018?

6 A. No.

7 Q. That's where I keep getting lost.
8 So then tell me who the
9 1.2 million White voters are on Table 13.
10 And I know you have done this, and again, I
11 am sorry for being dense. It could be the
12 hour.

13 A. These are the individuals who
14 were registered to vote in 2014 and 2018
15 and who didn't move and who were White. Of
16 them, I divided them into two groups of
17 individuals: People who got new polling
18 places and people who didn't.

19 Q. Okay.

20 A. Of the people who got new polling
21 places, 31.33 percent voted on Election Day
22 in 2018.

23 Q. Okay.

24 A. But the people who didn't get new
25 polling places, 37.61 percent -- these are

1 rounded approximately -- voted on Election
2 Day in 2018.

3 Q. Okay. I think I follow.

4 A. If I didn't say -- I am now just
5 concerned about all of these caveats. This
6 includes only people who voted in 2014.

7 MR. BELINFANTE: Okay. Got it.

8 Tell you what, if you all give me
9 another ten minutes, I may be wrapping
10 up.

11 MR. CREELAN: Take a break?

12 MR. BELINFANTE: Yes.

13 (Break taken.)

14 Q. If you could turn to page 75 of
15 your report, paragraph 182, the first
16 sentence says, "Existing literature in
17 political science provides evidence that
18 eligible voters whose voting places change
19 are less likely to vote in future
20 elections."

21 My question is: Other than the
22 studies we talked about earlier that are
23 cited previously in your report that
24 examine the L.A. gubernatorial recall in
25 2003 and the Manatee County, Florida

1 elections, is there any other existing
2 literature that you are referring to in
3 that paragraph?

4 A. There are, to my recollection, a
5 couple of other papers. I cited the
6 more -- well, the Smith one is the more
7 recent one, but the Brady- McNulty paper is
8 well known. So I cited those two as
9 exemplars.

10 I didn't cite additional ones
11 here because I think this sentence is --
12 two citations is sufficient to make that
13 point.

14 Q. Okay.

15 A. But it's my understanding that
16 there are several other papers that look at
17 this issue.

18 Q. Okay. One of those papers that
19 Smith discusses involves the City of
20 Atlanta and elections for mayor in the
21 early 2000s. And I can go back and pull it
22 if you want me to, but are you familiar
23 with that article?

24 A. I do not know.

25 Q. Okay. Just it's the Haskell and

Michael C. Herron, Ph.D. - February 26, 2020

173

1 Knots (phonetic) 2005 paper. Are you
2 familiar with that one?

3 A. What do you mean by "familiar
4 with"?

5 Q. Do you recall ever reading it?

6 A. I believe that I have read it.

7 Q. Okay. You didn't read it in
8 preparation for your report here; is that
9 correct?

10 A. I do not believe so.

11 MR. BELINFANTE: Okay. Dr.
12 Herron, I don't have any more questions
13 for you. I think we are going to have
14 a conversation off the record about
15 just getting -- potentially getting
16 some documents. So I am happy to go
17 off the record, and then if we need to
18 go back on, we can, but thank you.

19 THE WITNESS: Thank you.

20 MR. CREELAN: Thank you.

21 (Time noted: 2:26 p.m.)
22
23
24
25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

February 26, 2020

ERRATA

| PAGE/LINE | CHANGE/REASON |
|-----------|---------------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Michael C. Herron, Ph.D. - February 26, 2020

175

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MICHAEL C. HERRON, Ph.D.

Subscribed and sworn to
before me this day
of 2020

Regency-Brentano, Inc.

CERTIFICATE

STATE OF NEW YORK)

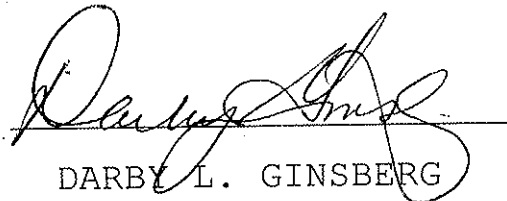
) ss.

COUNTY OF NEW YORK)

I, Darby Ginsberg, a Shorthand Reporter
and Notary Public within and for the State of
New York, do hereby certify:

That the witness whose deposition is
hereinbefore set forth, was duly sworn by me
and that such deposition is a true record of
the testimony given by such witness.

I further certify that I am not related
to any of the parties to this action by blood
or marriage and that I am in no way
interested in the outcome of this matter.



DARBY L. GINSBERG

1 February 26, 2020

2
3 INDEX

4 WITNESS EXAMINATION BY PAGE

5 Michael C.
6 Herron, Ph.D. Mr. Belinfante 5

7 DEFENDANTS' PAGE

8 Exhibit 1 13 expert report

9 Exhibit 2 14 initial disclosures

10 Exhibit 3 43 Brady and McNulty
11 article from 2011

12 Exhibit 4 60 Amos, Smith and St.
13 Claire article from
14 2017

15 Exhibit 5 69 results of the 2018
16 election

17 Exhibit 6 69 results of the 2016
18 election

19 Exhibit 7 69 results of the 2014
20 election

21 Exhibit 8 98 Democracy Diverted
22 report

23 Exhibit 9 102 2010 Census Georgia
24 Profile

25 Exhibit 10 107 2020 Census document

Exhibit 11 113 census analysis of
Rabun County and
Stephens County

Exhibit 12 117 map

| | | | | |
|---|---|--|--|--|
| | address (12) 58:14;63:8;87:9; 89:24;94:20;95:6; 107:21;126:18; 127:14;141:2;147:24; 163:4 | Again (20) 18:12;30:4;36:3,13; 43:7;64:21;79:10; 80:4;81:5;85:24;97:9; 107:20;134:4;138:3; 141:7;142:9;152:17; 154:22;165:15; 170:10 | always (2) 33:6;119:14 | 31:1;45:2;63:12; 68:3;73:5;82:8;93:9; 104:5;105:15;117:23; 149:12;152:9 |
| \$ | | | amended (6) 9:4,7,20;11:23; 12:8,17 | appear (7) 106:10,11,18; 140:5,16;141:14; 145:10 |
| \$400 (1) 7:12 | | | American (2) 109:19;145:4 | APPEARANCES (2) 2:1;3:1 |
| A | addresses (1) 8:5 | aggregate (3) 116:18;139:9,20 | Americans (1) 143:1 | appeared (2) 90:2;140:14 |
| a- (1) 41:19 | adjective (1) 115:20 | ago (1) 154:4 | among (7) 23:22;108:15; 145:14;150:1;158:2, 3;160:9 | appearing (1) 96:23 |
| above (6) 122:1,3;123:4; 157:23;158:7;159:5 | adjustment (1) 91:15 | agree (29) 27:1,7;41:11,13; 44:4;45:13,14;46:18; 50:2,11;54:6,7;57:16; 58:2;59:23;62:17; 71:19;72:12;77:24; 78:1;86:6,11;93:7; 97:13;99:20;114:6; 115:15,21;149:8 | Amos (9) 8:9,12;37:15;60:3; 8,15;62:14;64:15; 177: | appears (6) 40:4,15;100:7; 149:7;154:11;155:14 |
| absentee (4) 46:14,20;53:5; 164:9 | administer (1) 4:11 | | amount (9) 32:9;65:24;82:2,12; 83:10,16;84:8;88:12; 115:3 | Appendix (1) 99:17 |
| absolutely (1) 153:20 | administration (7) 21:15,22;22:3; 119:7,13;120:11,20 | agreeable (2) 5:16,17 | amounts (1) 44:18 | applied (1) 75:20 |
| academic (2) 21:13;119:22 | administrative (4) 44:20;45:12,22; 46:3 | AGREED (3) 4:3,8,12 | analogous (1) 170:1 | apply (3) 52:16,17;54:21 |
| accept (2) 32:6;122:22 | admittedly (1) 115:12 | agreeing (1) 73:4 | analyses (5) 75:18;78:20;79:23; 80:4;136:3 | appreciate (2) 132:23;134:4 |
| access (1) 134:24 | advance (1) 15:5 | Ah (1) 142:6 | analysis (61) 21:14;31:6,20; 41:25;48:1,9;50:6; 53:16;67:12,12; 74:13;75:16,20,22; 77:12,13;78:15,22; 79:8,13;85:12,17; 87:19;88:17;89:14; 21:90:8,23;91:24; 100:25;101:5,17; 102:6;112:7;114:1,4; 116:6,13;118:15; 120:7,21;124:4; 126:3,9,24;127:13; 132:22;134:2,22; 135:3;137:11;139:3, 5;147:5;166:3,7,23, 24,25;167:5;177:22 | approach (8) 101:8;133:7,13,22; 135:2;147:17;148:6,9 |
| accompanied (1) 109:13 | advantage (1) 101:5 | ahead (7) 13:3;14:9;64:14; 72:10;94:15;150:14; 160:6 | analyst (1) 31:11;32:13;118:5 | approaches (7) 30:22;34:20;35:21; 133:21;147:23;148:1, 13 |
| according (2) 20:2;162:5 | advantages (4) 133:15,23;135:1; 147:18 | AJC (2) 99:22;100:7 | analytical (3) 31:11;32:13;118:5 | appropriate (1) 19:16 |
| account (1) 139:4 | advocates (1) 98:24 | al (2) 1,; | analyze (5) 8:1;15:20;16:9; 21:20;72:19 | approximate (2) 16:15;97:24 |
| accuracy (2) 151:11;154:24 | affect (4) 32:10;44:18; 119:18;146:24 | all-black (1) 102:10 | analyzing (2) 21:25;77:1 | approximately (21) 16:15;65:20;72:13, 14,15;74:19;90:2; 97:17,20;142:15,16, 20,20;144:16,20,23, 25;145:2;162:6,8; 171:1 |
| accurate (14) 14:17;19:22;26:16; 41:21;95:3;116:22; 123:18;138:11;151:7, 7;162:22,23;165:23; 168:12 | affected (12) 30:8;34:22;35:5; 36:24;37:2,11;53:1; 54:14,24;128:12; 136:21;147:12 | alleged (2) 28:14;29:11 | anecdotal (3) 61:13,22,24 | area (1) 149:6 |
| accurately (1) 7:24 | affects (1) 63:15 | alleviates (1) 101:6 | Angela (2) 44:7;46:10 | areas (1) 10:25 |
| acknowledgments (1) 98:23 | affidavit (10) 18:3;35:22;56:22; 80:13;99:15;100:18; 107:8;134:1;136:4,5 | allow (2) 90:6;92:7 | answered (6) 84:20,22;92:14; 103:23;126:23;133:5 | argue (2) 59:13;120:16 |
| across (10) 30:22;58:22;87:25; 89:3;118:21,25; 119:24,24;121:13; 139:20 | affidavits (1) 120:22 | allowed (1) 5:11 | anymore (1) 19:6 | arguing (1) 75:9 |
| ACTION (2) 1;176:15 | afraid (1) 56:3 | ALLOY (1) 3:3 | apologize (12) | around (4) 9:19;14:3;121:15; 158:15 |
| actual (1) 86:21 | African- (2) 142:25;145:3 | all-white (1) 102:10 | | article (20) 22:21;43:8,10,13, 15;46:8;60:4,7,9,14, 15,17,18,22;61:4; 63:6;64:15;172:23; 177:,12 |
| actually (12) 7:9;15:20;16:5; 67:10;89:3;90:15; 99:2;120:13;149:15; 153:1;154:8;170:3 | African-American (7) 29:12;36:11; 125:10;129:22; 144:25;146:24; 156:15 | almost (3) 101:10,11,15 | | articulated (1) 131:15 |
| added (2) 76:15;78:13 | African-Americans (4) 36:21,23;37:1; 146:17 | alone (7) 114:11;127:23; 130:12,15;131:19; 132:2,6 | | aspect (1) |
| additional (4) 85:16;106:8;126:6; 172:10 | AFTERNOON (1) 111:1 | along (1) 117:25 | | |
| additions (3) 19:23;21:1,7 | | alter (1) 63:23 | | |

| | | | | |
|--|---|---|---|---|
| 19:4 aspects (1) 119:12 assess (3) 35:24,25;91:16 assessment (1) 88:10 assign (2) 77:10;81:16 assigned (12) 44:23;76:5;77:4,20; 78:2,12;83:25; 137:12;143:10,15; 144:2;167:14 assignment (2) 89:1,9 assignments (1) 21:9 assist (1) 8:1 assisted (1) 99:1 associated (5) 81:17;83:1;84:4; 122:4;156:13 assume (1) 88:25 assuming (1) 84:11 ATLANTA (4) 1:2;3;7;99:23; 172:20 Attached (2) 19:18;20:23 attempt (1) 63:7 attempted (2) 107:12,13 attention (7) 117:24;142:23; 153:9;154:6,25; 164:23;170:2 attesting (1) 150:9 attorney (1) 9:1 Attorneys (5) 2:4,16;3:5;7:8; 10:13 author (1) 98:22 authored (1) 99:5 authorized (1) 4:10 authors (4) 98:15,18;99:2,4 Avenue (2) 1:18;2:5 average (4) 49:21;107:4;115:2, 18 away (1) | 64:15 axis (7) 111:11;121:19; 153:14;156:14,18; 157:8;158:16 B back (17) 20:24;34:15;44:14; 49:9;64:16;81:8; 84:24;99:16;113:11; 129:3;130:5;150:6; 154:3;159:14;167:23; 172:21;173:18 background (1) 6:21 backwards (1) 72:6 ballot (7) 24:18,19;164:8,9, 10,12,16 ballots (6) 48:3;70:4,13,18; 74:12;164:4 bar (2) 112:15,17 bars (2) 113:16;153:18 based (19) 14:15;36:9,16; 39:12;59:14;82:2; 100:6;108:23;110:1, 3;114:25;128:11; 131:8,14;133:10; 134:14;137:13;154:7; 155:16 basic (2) 64:22;168:15 basis (6) 33:1,14,25;67:18; 128:15,17 bear (1) 133:17 becomes (1) 97:15 begin (1) 66:5 beginning (5) 49:13;50:22;56:6; 93:7;97:19 begins (4) 51:3;61:11;99:17; 142:5 Behalf (1) 1:15 behaved (1) 167:6 behavior (3) 51:25;63:8;67:19 behind (1) 112:7 belief (1) | 60:25 BELINFANTE (44) 3:4,9;5:5,7,19,21; 10:15;11:3;13:3;14:8; 18:14;19:17;20:7,12, 16,21;26:22;41:1,21; 42:15;47:8,10;60:2; 64:11;68:23;72:9; 97:25;102:20;104:13; 107:11;110:5;111:6, 14;113:23;115:10; 125:2,5;152:25; 155:9;166:10;171:7, 12;173:11;177: below (1) 159:3 benefit (1) 144:9 best (2) 11:10;21:20 better (3) 29:7;59:16;139:17 Beyond (2) 17:7;67:11 big (2) 123:1;135:17 bigger (1) 145:19 Bill (1) 23:21 bit (2) 53:19;144:10 black (44) 32:11;35:5;37:9; 101:11,15;107:3; 116:4,8,20;120:4; 125:21,24;128:13,23; 129:17;130:9,18; 131:21;132:8;133:2; 134:10;136:12,23; 137:4,11,18;138:14, 25;139:12,12,21; 141:24;142:19; 145:20;147:12; 149:16;154:14; 156:24;157:1;158:11, 12,21;159:4,11 Black/ (1) 134:7 Blacks (1) 31:9 Block (14) 1:17;2:3;90:8; 100:25;101:24,25; 102:11,12,18;103:10, 16;124:6,9;125:8 blocks (7) 103:4,6,7,12; 127:20,24;128:7 blood (1) 176:16 bodies (1) 25:18 | borders (1) 121:1 both (16) 68:12;92:24;114:5; 115:16;140:17; 141:14;145:10; 150:25;155:24; 160:10;162:16; 163:13;165:6;166:5; 168:7;169:19 bottom (2) 22:19;26:1 boundaries (3) 26:8;89:4;148:21 boundary (1) 89:7 BRAD (1) 1: Brady (16) 37:14;43:8,12,23; 44:5;45:9;46:1;49:10; 51:9;54:1,10;55:18, 24;56:25;81:11; 177:10 Brady- (1) 172:7 Brady-McNulty (2) 49:10;61:23 break (11) 6:10,14;64:11,13; 68:16;90:6;153:5,7,8; 171:11,13 breakdown (3) 47:3;114:19;140:4 breaks (2) 148:20;160:16 Brian (2) 8:9,12 briefly (2) 50:9,24 bright (1) 34:7 bring (1) 133:20 broader (4) 39:8;91:17,21; 168:14 broadly (4) 79:14;80:5;82:13; 84:9 broken (2) 159:16;161:18 brought (4) 34:20;94:10; 133:17;148:12 C calculating (1) 129:6 calculations (1) 39:12 calendar (1) | 109:8 California (3) 44:15;46:2;54:11 call (3) 52:9;54:20;99:17 called (5) 5:2;81:12;131:10; 133:18;148:11 came (1) 107:16 Can (59) 9:25;10:23;11:8; 12:1,7;19:10,17; 26:22,23;31:24;33:6; 34:3;35:24,25;37:5; 41:2,7;49:5;53:3; 64:11,14;67:14; 68:16,22;73:6,23; 78:20;87:7,24;97:13; 105:11;116:12; 117:17;119:18; 123:15,23;130:25; 133:8,8;138:3; 140:20;144:5,6,10; 145:9;148:17;149:3, 15;151:13;153:4; 156:9,10;161:6,9,19; 164:18,21;172:21; 173:18 candidates (3) 38:17,18;164:10 Canvassing (1) 24:5 Capacity (1) 1:7 caption (2) 117:25;160:7 captured (1) 39:13 carefully (1) 51:21 carrying (1) 31:20 Case (22) 1:5;5:8;7:12;8:21, 25;9:12;10:8;11:23; 14:15;23:7,9,14,20; 24:1,6,8,22;30:21; 35:15;54:12;80:17; 147:6 cases (3) 23:2,3;48:7 cast (7) 48:3;70:4,13,18; 74:12;164:1,16 cause (3) 65:8,25;66:3 caused (3) 28:15;67:21;101:6 causes (2) 33:16;34:8 caution (1) 10:4 |
|--|---|---|---|---|

| | | | | |
|--|---|--|---|--|
| caveat (2) 36:3,13 | 5:24 | cleared (1) 103:22 | comission (1) 19:12 | 17:4;35:12 |
| caveated (1) 64:6 | C-H-A-R-L-E-S (1) 5:25 | clearer (1) 74:7 | comment (1) 119:21 | concludes (2) 32:2;111:22 |
| caveats (1) 171:5 | chart (1) 114:22 | clearly (1) 73:25 | commenting (1) 96:4 | conclusion (27) 19:3;25:13;35:2,3; 51:8;54:3,19;62:4; 64:5,6;128:10,16; 129:11,14,19;130:7, 11;133:10;134:17; 135:12;136:6,20; 137:2;146:22;147:10; 152:2;155:3 |
| census (38) 90:8,9,16,19; 100:24;101:24,25; 102:10,12,18,24; 103:3,3,6,7,16;107:3, 7,10,23;109:6,10,12; 110:4;113:25;114:3, 6,25;115:12,19; 124:5;125:8;127:19, 24;128:7;177:21,22 | check (3) 60:13;97:12;121:7 | close (7) 25:10,19;67:14; 68:21;75:13;121:24; 126:5 | Commission (1) 24:5 | |
| certain (3) 38:5;115:9;148:22 | choose (2) 18:8;25:10 | closed (23) 76:3;92:25;93:14; 112:16,19;117:21,22; 121:11;126:9,15; 127:12,13;129:8; 131:14,14,17;137:20, 23;139:8;143:22,24; 144:1;155:13 | committee (1) 21:8 | conclusions (6) 16:22;17:17,20; 65:9,25;100:10 |
| certainly (3) 9:9;107:19;155:15 | chose (1) 25:18 | closes (2) 78:25;79:1 | communication (1) 16:19 | concur (3) 83:9;114:13,14 |
| CERTIFICATE (1) 176:1 | Christine (1) 24:12 | closing (4) 24:1,20;76:16; 131:4 | communications (5) 10:5,6,23;18:15; 19:13 | conduct (5) 50:5;85:16;132:21; 133:6;147:5 |
| certified (1) 71:20 | circle (2) 157:11;158:18 | closure (10) 92:1;125:21,21,24, 24;131:5;136:12,23; 138:10,20 | Community (3) 109:20;116:20,20 | conducted (5) 61:14;79:23;91:18; 116:6;166:7 |
| certify (2) 176:8,14 | circles (1) 156:12 | closures (30) 11:19;34:23;35:4; 92:8;111:25;120:1,3; 122:18;123:15;124:5; 126:4,8;128:12; 130:9,18;131:20; 132:8;133:1,15; 136:20;146:23; 147:11;148:15; 151:15,22;152:4,19; 154:12;155:2,7 | comparing (3) 116:7;149:8;159:21 | conducting (1) 75:19 |
| challenges (1) 63:6 | Circuit (1) 24:6 | clustered (1) 121:15 | comparative (2) 32:25;91:24 | confidence (5) 38:25;39:2,14,15, 18 |
| change (23) 25:5;53:15;56:6; 65:8;70:24;71:8,14; 77:19;81:20;82:2,3; 83:1,5;84:13;85:6; 86:21;96:9,21;122:9; 123:3;135:11;150:24; 171:18 | citation (1) 60:12 | code (2) 7:7;15:8 | comparisons (1) 68:18 | confident (4) 11:18;17:24;46:23; 84:12 |
| CHANGE/REASON (1) 174:5 | citations (1) 172:12 | codes (4) 140:7,18,18;163:16 | compelling (1) 132:13 | confirm (4) 72:1,4;84:15; 161:24 |
| changed (11) 21:10;44:21;49:20; 51:25;80:11;84:16; 85:22;121:9;150:12, 24,25 | cite (9) 37:14;43:7;54:1,3; 92:17;100:14;107:13; 108:1;172:10 | cognizant (1) 147:19 | compensated (1) 7:12 | confirming (1) 121:12 |
| changes (39) 15:3;26:7;30:7,18, 23;32:2;35:19,20; 46:3;51:23;62:12,15; 63:23;66:16,19,24; 74:3;77:2,15;78:8; 82:24;85:1;89:14,16; 91:1,10;92:20;94:20; 95:6,12,21,25;96:14, 18;119:10,15;150:21; 151:23;152:5 | cited (4) 90:16;171:23; 172:5,8 | column (16) 46:9;50:22;51:3; 56:5;100:3;125:17; 131:10;137:23,23; 138:6;140:9;150:24; 161:23;162:13; 163:10;167:24 | complaint (7) 7:6;9:4,7,19;11:23; 12:9,17 | confused (1) 41:6 |
| changing (3) 61:1;86:20;123:5 | cites (3) 15:8;103:3;107:2 | columns (1) 168:2 | complete (5) 12:25;63:10,13; 67:2,3 | confusing (2) 6:19,25 |
| characterization (3) 11:4;54:8;165:13 | citing (2) 43:24;100:22 | combines (1) 167:18 | completely (2) 48:22;57:23 | congressional (2) 24:12,14 |
| characterize (2) 91:6,8 | City (1) 172:19 | combined (1) 152:19 | completing (1) 60:16 | consequences (1) 119:15 |
| characterizing (1) 83:7 | Civil (1) 5:12 | comfortable (3) 107:8;127:6;133:24 | compound (1) 71:3 | consider (14) 18:2;21:9;53:17; 56:19;66:19,24; 67:21;70:25;74:1,11; 77:11;85:5,6;139:7 |
| Charles (1) | Claire (6) 60:4,9,16;62:15; 64:15;177:12 | | computer (1) 7:7 | consideration (2) 101:9,14 |
| | Claire's (1) 37:16 | | conceivably (3) 71:14,18;122:7 | considered (5) 66:24;74:13;76:17; 80:24;84:24 |
| | clarification (3) 77:8;104:10;115:7 | | concern (1) 63:9 | considering (1) 81:25 |
| | clarify (8) 18:13;25:24;31:24; 32:19;40:21;51:1; 52:22;132:1 | | concerned (1) 171:5 | considers (2) 104:21,24 |
| | clarifying (1) 83:22 | | concerns (2) 62:22;63:1 | consistency (1) 30:22 |
| | clarity (2) 47:5;127:2 | | conclude (15) 45:10;46:1;49:25; 54:12;61:13;64:23; 66:4;128:22;130:17; 131:18;132:6,25; 134:8,13,15 | consistent (2) 34:23;154:21 |
| | class (1) 21:3 | | concluded (2) | consolidated (1) |
| | classifications (1) 106:24 | | | |
| | classified (1) 34:9 | | | |
| | clear (7) 17:14;74:17;100:9; 103:10;120:14; 121:10;124:7 | | | |

| | | | | |
|--|--|---|--|--|
| 44:21 consolidating (2) 24:2,21 Constitution (1) 99:24 construed (1) 84:9 CONT (1) 3:1 contacted (4) 8:24;9:4,12,23 contains (1) 131:10 content (1) 16:19 contest (1) 38:17 contests (1) 68:13 context (10) 6:20;45:5;51:19; 52:10,22;55:23; 91:17,20,22;134:15 continue (2) 18:8,21 CONTINUED (1) 111:5 contrast (1) 158:14 contributed (1) 106:23 contributes (1) 130:10 control (2) 42:5;63:7 convenient (1) 64:10 conversation (1) 173:14 copy (2) 13:5;111:16 corner (1) 149:5 correctly (4) 49:23;121:23; 125:25;163:5 correlation (1) 86:3 cost (9) 55:23;56:20;57:1,2, 5:82;17:83;1:84;3,15 costs (23) 44:17,20,23;45:12, 22;46:4;55:19,20; 56:7,8;57:13;58:22; 59:12,22;81:13,17,25; 82:1,12;83:7,8;84:8, 11 couch (2) 135:24;136:2 counsel (9) 4:4;10:3,6,23; 12:24;16:20;18:15; | 19:13;42:14 count (7) 37:5;48:5;65:4; 137:23;138:2,5,6 counted (2) 35:17;87:21 counties (36) 26:12;27:3,10; 44:19;45:10;46:2; 57:21;58:1;93:4,13; 94:10,13;95:1; 111:11;112:19;113:8; 114:7;117:9,15,20; 118:6,12,19;119:1; 120:9,20;121:14; 122:16,24;127:19; 139:6,8;153:13,14,17; 159:2 counting (11) 35:23;36:8,9,17; 37:3;129:2,6;146:4, 12,15;152:18 counts (2) 80:14;137:24 county (115) 27:3,5,8,25;28:9, 23;29:10,19;44:7; 46:11;57:8,9;58:13, 22;59:19;60:19,25; 61:15;64:24;65:6,14; 67:10;76:15;78:13, 23,24;79:18,25;80:2; 81:5;91:22,25,25; 92:2,3,12,17,17,23,23, 25,25;93:12,13,15,20, 21;95:5,5,13,14;96:9, 10,21;97:11;100:21; 103:17;111:24,25; 112:17;113:13;114:1, 2,4,5;115:1,1,16,17; 118:15,16;120:21; 121:1,6;122:4,8,25; 123:2,9;126:4;127:9; 148:21;149:7,7,16,22; 150:11,20;151:2,9; 154:4,10,10;155:4,5, 5,12,22;156:4,8,13, 22;157:7,10,14;158:2, 14,17,21,24;159:16; 171:25;176:4;177:23 county-by-county (1) 120:7 County's (1) 93:1 couple (8) 25:1;35:21;78:20; 79:10;86:16;87:8; 153:3;172:5 course (9) 10:1;16:3,17;22:14, 15;75:23;97:24,25; 113:7 courses (1) | 22:9 COURT (8) 1:1;6:9;24:7;30:15; 33:12;34:17;73:16; 144:9 cover (1) 108:22 covered (2) 7:10;81:6 covers (3) 22:6;143:20;165:17 creation (4) 42:22;96:25;97:7, 21 credible (1) 107:7 CREELAN (108) 2:8;5:17;9:25; 10:19;11:5;16:25; 17:22;18:12;19:7; 20:5,10,13,19;26:1, 20;31:13;32:14;33:8, 19;34:12;35:13; 40:19;41:4,20,22; 42:9;47:5,9;48:19; 50:14;51:11;52:19; 54:16;55:1,57:17; 58:7;59:2,7;61:5; 62:8;63:3;64:9;65:11; 67:23;71:24;73:1,17; 74:4,15;78:17;79:3; 81:1;82:6;85:9;86:7; 87:2;88:6;90:12;91:3; 93:16;95:8;99:25; 104:9,14;111:18; 113:14;115:5,13; 116:10,23;118:9; 119:3;122:11;124:25; 125:3;126:10;127:1, 5;128:24;130:20; 131:24;132:18;133:4; 134:11;136:24; 139:13;143:6,16; 144:7,12;146:2; 147:2,14;149:9; 151:24;152:6,15; 153:6;154:16;155:8; 159:8;160:2;165:10; 166:8,12;168:23; 171:11;173:20 criticism (1) 132:15 cross (3) 34:4;89:6;103:17 curious (1) 12:6 current (1) 109:17 currently (1) 22:10 curriculum (2) 19:19,23 cut (4) | 44:20;45:11,22; 46:3 cutoff (6) 124:19,22;125:6; 129:15,19;137:14 cutoffs (1) 128:8 cuts (2) 58:5;109:11 CV (1) 20:25 D Darby (3) 1:19;176:6,21 darkest (2) 117:15;118:7 Dartmouth (3) 8:10;21:2;22:11 dashes (1) 45:23 data (51) 8:1,5;10:2;11:16, 18;15:21;16:1,9,13; 17:24,25;21:25;22:4, 6;34:1;35:17;37:5; 40:10;42:24;48:5,10, 11;50:9;67:15;90:5,9, 10,15,16,20;92:6; 94:8,19,25;96:1,16; 106:21;107:10;109:6; 110:1;114:25;115:12; 124:14;127:18;128:1, 2;132:5,6,14;166:25; 167:4 database (1) 42:21 date (15) 8:22;9:6,17;13:14, 23;42:22;95:15,16; 97:4,5,7,9;107:19; 109:7;115:9 dates (5) 13:25;95:20;96:8; 109:13,24 day (9) 47:25;63:24;113:9; 163:21;168:11; 169:21;170:21;171:2; 175:13 DC (1) 2:18 December (5) 9:15;11:13;15:25; 16:14;17:5 decide (2) 18:20;19:1 decision (14) 15:20;18:10;63:23; 66:11;72:25;73:16; 92:3,4,20;93:2,15; 95:16,17;96:24 | decisionmaking (1) 18:17 decisions (4) 25:16;29:14;31:9; 45:10 decreased (2) 80:2,22 deemed (2) 31:10;32:12 deems (1) 71:7 Defendant (1) 1:16 Defendants (4) 1:3;5:5;7;94:2 DEFENDANTS' (1) 177:7 Defendant's (8) 69:16,19,22;98:7; 102:23;107:22; 113:25;117:4 define (5) 26:6;29:22;82:11; 84:7;126:14 defined (3) 18:23;138:24;141:5 definition (2) 26:9;131:14 definitions (1) 139:10 degree (2) 121:16,19 Democracy (17) 95:24;98:3,7,15; 99:5,10;100:11,20; 150:6,10,18;151:6,11; 154:7,22,24;177:18 demographics (1) 92:22 dense (2) 169:6;170:11 depend (2) 82:17;121:1 Depending (1) 78:9 depends (2) 31:19;89:4 deposed (1) 6:2 Deposition (7) 1:14;4:9,14;5:9; 7:4;176:10,12 depositions (1) 12:21 describe (10) 10:24;12:14;23:20; 27:16;49:1,17;52:11; 60:23;87:7;121:25 described (3) 36:6;53:18;85:14 describes (5) 65:17;111:9;140:3, 8;160:13 |
|--|--|---|--|--|

| | | | | |
|---|--|---|---|--|
| describing (5) 16:2;48:23;86:25; 87:15;121:22 description (3) 61:3;87:15;91:2 design (1) 101:21 determine (9) 31:22;33:4,14; 41:25;81:23;116:7; 120:2;131:8;135:9 determining (1) 99:1 deviation (1) 39:17 died (2) 41:13;42:4 difference (16) 31:7;33:3;49:20; 66:2;125:18,19,20; 134:7;135:10,17; 142:9;145:23;146:10, 18;152:3,13 differences (3) 33:7;55:9;148:14 different (38) 20:6,8;30:8,22; 34:20;35:21;36:1; 37:10;49:4;68:17; 71:6;75:17;77:21,24; 78:4,12,20;79:10,16, 18;88:1,19,20,25; 89:1;129:18,19; 137:5,7;138:17; 147:22,23;148:13; 151:21;152:24; 160:13;161:18; 167:17 differently (4) 31:10;32:11,20; 81:3 difficult (1) 29:2 DILLON (1) 2:15 direct (1) 105:11 direction (1) 147:21 directly (2) 94:9;123:16 dis- (1) 35:4 disadvantage (3) 101:8,13,16 disadvantages (3) 133:16,23;147:18 disagree (2) 64:4,7 disclose (2) 10:5,22 disclosing (1) 19:11 | disclosure (1) 18:14 disclosures (4) 14:11,14;18:24; 177:9 discovery (2) 5:10;42:17 discrimination (1) 27:20 discuss (8) 12:13;16:21;17:8; 26:5;91:20;111:19, 20;118:19 discussed (5) 38:2;100:15;131:9; 146:22;147:16 discusses (4) 26:12;36:7;93:24; 172:19 discussion (3) 93:4;100:24;110:7 disinterested (1) 73:20 disparate (7) 28:14;29:11;31:5; 33:16;119:6;134:9; 135:18 display (1) 24:18 disproportionate (18) 33:17;34:6,10; 35:11;116:4,8,17; 120:4;128:23;129:16; 130:4,8,17;131:20; 132:7;133:1;134:10, 20 disproportionately (10) 36:24;37:2,11; 128:12;136:21; 141:23,24;142:24; 146:24;147:12 disruptive (1) 63:25 distance (7) 49:14;53:10,11,12; 54:14,24;55:8 distances (5) 51:24;52:25;53:2; 54:15,23 distinguish (3) 70:23;78:22;79:24 distribution (1) 160:8 DISTRICT (3) 1:,1;24:14 diverse (1) 102:12 Diverted (17) 95:24;98:3,8,15; 99:6,11;100:11,21; 150:6,10,19;151:6,11; 154:7,22,24;177:18 divide (1) | 145:9 divided (2) 65:4;170:16 DIVISION (1) 1:2 document (15) 14:17,22;20:2,9,17, 20,22;32:6;45:18; 53:22;103:2;107:23; 114:15;153:12; 177:21 documents (5) 7:10;62:13;69:1,4; 173:16 done (11) 17:10;43:21;47:1; 62:5;63:11;75:22; 86:13;89:9;122:8; 155:1;170:10 door (1) 87:23 dots (1) 121:15 doubles (1) 57:8 Dowd (1) 9:2 down (9) 58:6;90:6;96:7; 100:3;142:21;144:10; 148:20;160:16; 161:18 Dr (8) 5:6,9,22;6:1;15:2; 20:11;47:7;173:11 drafting (1) 22:23 draw (7) 31:17;68:18; 123:15;137:1;153:9; 154:5,25 drawn (1) 115:8 draws (2) 109:15,19 driving (1) 53:11 drops (2) 140:23,24 due (3) 51:25;96:15;167:16 duly (2) 5:3;176:11 during (2) 15:4;87:13 | early (5) 47:23;48:12,13,17; 172:21 easier (2) 68:17;111:16 easy (1) 123:1 economic (1) 109:18 effect (31) 15:6,22;16:6,10,23; 17:20;18:9,21;19:5; 33:17;34:6,11;35:12; 47:21;50:12;63:25; 116:4,8,17;119:6; 120:4;128:23;129:17; 130:4,8,18;131:20; 132:7;133:1;134:10, 20 effective (7) 95:15,16;97:15; 99:8;109:13,24;110:3 effectively (4) 96:19;105:4; 122:20;159:1 effects (1) 59:17 effort (4) 82:12;83:10,16; 84:8 either (10) 6:19;19:12;26:7; 47:23;87:20;116:19; 129:21;137:17,20; 139:11 elapses (1) 82:3 election (83) 15:6;21:14,22;22:2; 23:18;24:11;28:19; 38:14;41:3,8,19;42:3, 8;44:6,9,16;47:25; 54:11;55:6;60:24; 62:16,16,19,24,25; 63:24;67:7,20,21; 69:7,8,17,20,23; 70:17;71:1,2,16,16; 72:24;73:16;75:21; 81:21,22,24;82:24,25; 83:2,4,18,19,25;84:1, 3,5,6;85:1,2,3,4,8,21, 23,23;86:2;113:9; 119:7,12;120:11,19; 160:20;161:17; 163:21;164:24;167:2, 15;168:11;169:21; 170:21;171:1;177:, 14,17 elections (15) 15:4;21:18;24:5; 38:3,4,15;54:6;68:12, 16;72:19;76:4;88:21; 171:20;172:1,20 | electoral (2) 61:15;62:5 electors (1) 169:14 elevated (1) 24:15 eligible (7) 40:17;41:18;42:2,7, 21;43:1;171:18 else (3) 39:5;103:24;135:5 emphasized (1) 148:2 encountered (1) 57:6 end (4) 38:15;97:18; 109:16;167:11 ended (1) 112:2 ending (2) 49:14;50:23 endpoints (1) 68:22 ends (1) 51:4 engage (9) 12:5;21:22;25:17; 27:23;28:5;41:24; 80:6,12;120:25 engaged (7) 23:23;26:12,15; 27:3,10,15;61:1 engages (1) 27:13 engaging (1) 95:25 entire (3) 67:9;73:22;94:6 entirely (1) 13:18 entirety (1) 75:8 entitled (1) 10:1 environmental (1) 83:14 equal (2) 30:10;59:12 equally (3) 30:9;52:15,17 ERRATA (1) 174:3 escape (1) 117:24 ESQ (5) 2:8,10,12,20;3:9 estimate (2) 7:23;37:6 estimates (4) 39:11;115:11,11,16 estimating (1) 129:5 |
|---|--|---|---|--|

| | | | | |
|--|--|--|--|--|
| estimation (1) 36:18 | 133:20;137:7;138:5; 140:23;141:11; 143:23;148:24; 150:13;156:22;157:1, 18;158:3;159:19; 162:3 | 75:10 | 123:8,14,17,21; 148:16,18,19;151:13; 153:10;154:6,9,13,17; 155:12,16,19;156:10, 12,20;159:17,21,22 | 61:15;171:25 |
| et (2) 1:, | | extends (1) 67:11 | | focus (3) 67:6;120:20;142:23 |
| ethnic (1) 48:16 | | extensive (1) 58:12 | | focusing (2) 141:21;146:17 |
| evaluate (2) 56:10;99:13 | exemplars (1) 172:9 | extent (2) 52:8;73:23 | figures (3) 46:22;49:24;156:20 | follow (1) 171:3 |
| even (5) 14:16;17:16;33:2; 84:15;163:24 | exemplified (1) 148:12 | extremely (1) 102:2 | file (39) 13:13,15,22;37:4; 40:5,11,15,24;41:12, 18;42:2,7,11,22;65:1; 66:6,8,12;67:1;90:3; 93:25;96:23;97:1,8, 21;101:7;103:25; 104:8;105:2;106:9, 11,12,14,25;131:7; 140:14,15;141:3,4 | following (2) 97:23;103:21 |
| everyone (1) 142:10 | exercise (9) 36:18;37:4;39:4; 65:19;129:2;146:5, 15;152:18;168:17 | F | | follows (5) 5:4;36:22;38:10; 111:4;129:11 |
| evidence (12) 61:13,22,24;92:19; 96:12;133:10;134:9; 136:5;147:9;151:6,7; 171:17 | exercises (2) 36:8,10 | fact (15) 16:21;34:19;62:23; 65:13;75:3;93:24; 101:6,13;118:22; 128:8;129:11;135:6; 142:7;147:20;148:12 | filed (2) 9:5,20 | Footnote (6) 13:10,13,15,20; 38:24;100:14 |
| evidenced (1) 134:1 | Exhibit (52) 13:4,8;14:10,11; 20:10;43:11,12;47:7; 49:9;54:3;60:6,8; 64:17;69:2,6,8,9,16, 19,22;70:1,2,11,16; 98:4,7,12;102:22,23; 107:15,22;113:24,25; 114:17,18;115:8; 117:4,8;149:4; 150:19;177:,,,8,9,10, 15,18,21,22,24 | factor (1) 86:19 | filer (1) 106:14 | Forget (1) 163:24 |
| evident (1) 136:10 | Existing (2) 171:16;172:1 | factors (3) 31:21;68:7;83:14 | files (10) 106:23;131:9; 140:6,17;141:15; 145:11;155:25; 160:11;168:8;169:20 | forgive (3) 43:18;64:21;70:1 |
| exact (4) 8:22;13:14,23;97:5 | expected (1) 15:3 | facts (1) 10:2 | finding (5) 18:3;37:17;57:2; 61:21;98:18 | form (76) 4:6;5:14;26:21; 31:14;32:15;33:9,20; 34:13;35:14;40:20; 41:5,22;42:10;48:20; 50:15;51:12;52:20; 54:17;55:2;57:18; 58:8;59:8;61:6;62:9; 63:4;65:12;71:25; 73:2,18;74:5,16; 78:18;79:4;81:2;82:7; 85:10;86:8;87:3;88:7; 90:13;91:4;93:17; 95:9;100:1;113:14; 115:6;116:11,24; 118:10;119:4;122:12; 125:1,4;126:11; 128:25;130:21; 131:25;133:5;134:12; 136:25;139:14;143:7, 17;146:3;147:3; 149:10;151:25;152:7; 154:16;159:9;160:3; 163:22;165:11;166:9, 13;168:24 |
| exactly (5) 8:15;9:16;32:5; 53:21;96:8 | experienced (2) 123:2;136:12 | FAIR (17) 1:6;15;7:25;11:3; 21:11;28:24;29:6; 40:6;53:11,12;61:3; 87:15;89:20;91:2; 116:15;132:15; 159:18 | filing (1) 4:13 | former (1) 52:5 |
| EXAMINATION (3) 5:20;111:5;177:4 | experiment (1) 44:19 | fairness (1) 154:5 | find (10) 8:5;52:13;58:23; 95:2,99:10;102:7; 104:3;106:8;107:6; 132:12 | forms (1) 47:15 |
| examine (8) 9:23;10:17;18:8; 19:4;48:11,15;62:2; 171:24 | expert (9) 7:16;12:9;13:8; 15:14;18:23;23:4; 74:14;75:17;177:8 | familiar (4) 55:20;172:22; 173:2,3 | findings (4) 17:17,19;18:1; 134:18 | Forsyth (8) 91:25;92:17,23,25; 93:12,20;95:5,14 |
| examined (4) 5:3;40:16;41:12; 92:21 | expertise (1) 12:12 | far (3) 50:6;125:18;128:4 | finds (2) 36:9;111:23 | forth (3) 109:18;154:3; 176:11 |
| examines (2) 44:10;138:14 | experts (1) 14:23 | fast (1) 154:13 | fine (8) 20:24;72:3;92:13; 93:10;97:13;104:4; 118:3;149:13 | forward (1) 154:13 |
| examining (3) 22:21;74:2;91:9 | explain (15) 121:4;123:24; 138:3;139:25;140:20; 144:5,14;148:17; 151:8;152:12;156:3, 9;160:23;161:7; 164:18 | features (3) 37:6;83:14;148:23 | FINK (1) 2:20 | four (1) 112:19 |
| example (5) 32:11;55:8;122:15; 157:7;168:5 | explained (4) 83:8;105:21; 133:12;157:12 | February (6) 1:10;9:10;13:24; 14:4;174:1;177:1 | first (20) 5:2,15;8:24;9:9; 45:21;49:12;50:21; 51:2;53:9;63:21,21; 72:24;73:15;103:9; 109:16;141:20;143:3, 4;165:13;171:15 | fourth (1) 108:14 |
| examples (6) 38:8;92:5,18;93:13; 94:11,11 | explaining (2) 51:22;75:11 | Federal (1) 5:12 | fit (1) 148:22 | fraction (9) 35:25;131:16; 142:14,21;143:9; |
| exceeds (1) 125:24 | explains (2) 151:18;161:14 | few (1) 121:17 | five (5) 34:7;96:20;126:5,7, 9 | |
| Excel (3) 153:22,24,25 | explanation (4) 52:3,4;80:10;156:6 | fewer (1) 142:24 | fixed (1) 83:15 | |
| except (6) 4:5;5:14;140:22; 142:10;156:18;170:2 | explore (2) 55:3,7 | fewest (2) 113:19,21 | Florida (6) 24:6,6;60:19,25; | |
| excluded (1) 166:22 | expressing (1) | field (3) 21:13;87:9;101:8 | | |
| excuse (35) 30:3,25;42:13; 50:25;55:4;63:18; 72:5;73:8;76:20; 91:12;93:4;94:25; 96:13;101:1,25; 104:2;111:9;113:1; 122:2;127:19;131:4; | | FIGHT (1) 1: | | |
| | | figure (44) 32:8;82:13;83:10, 17;84:9;89:11;111:9, 10;112:3,5,9,14,15, 23;113:17;117:6,7,10, 16,25;121:2;122:19; | | |

| | | | | |
|--|--|---|---|---|
| 148:25;156:14;158:8, 11 fractions (2) 146:10;148:22 framework (1) 136:3 free (1) 6:12 frequency (1) 43:4 frequently (1) 107:4 front (9) 30:15;33:11,12; 34:16;56:16;70:21; 71:21;102:4;149:4 full (6) 49:12;51:2;56:5; 60:12;61:10;63:21 Fulton (6) 57:7,9;158:14,17, 20,24 function (2) 166:16;167:7 fundamentally (1) 167:17 FURTHER (3) 4:8,12;176:14 future (2) 54:5;171:19 | 22:2,5,8;25:14,15; 26:12,14;27:10,21; 30:9;32:3;35:4,18; 36:12;40:17;41:2; 46:20;47:15,23;49:6; 50:7;52:18;54:21; 57:10;62:5;69:4; 79:15;81:20;90:2; 94:21;96:18;99:19, 22;100:12;101:10; 102:3,5,8,9,24; 103:17;114:5,17,19; 115:2,18;116:5,9; 117:3;118:21;119:25; 120:3;121:14;124:9; 127:24;128:13;130:4, 9,18;133:2,3;136:11, 13,21;140:5;141:15, 22;146:23;147:12; 148:15,20;149:5,23; 160:10;177: Georgians (2) 102:17;143:14 Georgia's (5) 15:3;65:20;117:9; 131:21;132:8 gets (7) 76:14;77:4;78:7; 81:4;84:23;89:13; 129:2 Ginsberg (3) 1:19;176:6,21 GIS (1) 8:5 Given (8) 35:23;67:15;76:2; 92:24;121:11;128:9; 137:13;176:13 giving (1) 81:22 goes (7) 41:17;64:19;77:21; 94:5;116:14;142:15, 19 Good (5) 5:5;50:17;130:14; 133:19,20 government (7) 25:5,9,14;26:15; 27:6,21;28:6 governmental (1) 25:18 governments (7) 25:15;27:3,8,25; 28:9,23;29:10 Governor's (1) 46:10 gradations (1) 122:21 graph (5) 121:4,5,7;123:17; 158:14 Great (2) | 5:19;114:16 greater (17) 36:20,25;37:8; 46:24;72:14,15;75:4; 115:22;121:17,18; 126:2;128:20,21; 129:12;136:14; 158:11,23 greatest (1) 108:16 ground (1) 133:9 group (12) 38:6,7,9;39:8; 48:16;102:3;131:10, 12;160:16;161:19; 167:11;168:4 groups (20) 30:9;34:22;36:1; 46:15;80:13;101:24; 102:1,19;103:10,17; 119:19;124:6,9; 125:9;131:6;140:9; 145:11;152:19; 160:13;170:16 growth (4) 122:8;123:2,10,11 gubernatorial (3) 44:6,16;171:24 guess (17) 22:20;32:21;44:13; 53:25;54:9;59:18; 67:5;74:10;76:24,25; 84:23;99:3;116:14; 134:6;135:8;152:22; 166:4 | 172:25 hate (1) 153:1 head (5) 7:21;14:1;46:23; 47:17;105:18 heart (1) 32:21 held (1) 110:7 help (2) 29:22;105:25 helps (2) 11:6,7 Hence (1) 137:22 HEREBY (2) 4:3;176:8 hereinbefore (1) 176:10 here's (1) 84:23 hereto (1) 4:5 HERRON (13) 1:14;5:1,6,10,22, 24;6:1;15:2;111:3; 173:12;175:8;176:9; 177: H-E-R-R-O-N (1) 5:25 Herron's (2) 20:11;47:7 hesitant (1) 17:9 high (2) 24:12;155:21 higher (5) 46:21;71:22;83:2; 84:4;138:24 highest (3) 112:3;113:16;150:1 highly (1) 50:1 historic (2) 44:15;45:6 holding (2) 59:11;83:13 home (1) 38:19 homogeneous (6) 101:23;102:1,18; 124:5,9;129:21 honestly (2) 68:19;86:12 host (1) 57:23 hour (3) 7:12;153:4;170:12 hours (1) 7:18 hundred (4) 14:6;102:2;112:20; | 129:20 hypothetical (10) 34:3;39:9;68:24; 85:20;127:9,10; 132:12;135:4,6;151:5 Hypothetically (14) 31:15;39:6;57:19; 58:17,20;59:1,3; 92:14;97:17;135:13, 20,25;153:25;167:19 hypotheticals (1) 58:18 |
| G | | I | | |
| gain (1) 126:7 gains (2) 61:16;62:6 Game (1) 22:16 Gardner (1) 23:13 general (13) 6:4;11:6;15:5; 34:19;36:5;38:1,55:5; 59:11;76:4;107:9; 161:17;164:24;168:9 generally (14) 7:22;14:23;21:23; 22:3;35:20;40:2; 48:13;60:24;74:24; 76:24;81:13;102:8; 107:25;108:3 generates (1) 136:6 geographical (1) 119:20 geography (1) 139:6 geoplace (1) 65:19 GEORGIA (84) 1:,3:7;12:15,25; 15:8;21:18,21,23; | | idea (1) 168:15 Identification (13) 13:9;14:12;23:8; 43:14;60:10;69:18, 21,24;98:9;102:25; 107:24;114:2;117:5 identified (4) 14:25;23:2;134:7; 168:18 identifier (1) 64:24 identifies (2) 98:25;111:24 identify (7) 14:22;66:13; 101:13;102:13; 103:25;117:15;124:8 identifying (4) 38:16;66:9;104:22; 105:3 ID's (2) 65:6,15 Ignore (1) 68:5 impact (15) 22:21;28:15;29:12; 31:5,9;33:16;47:25; 63:1;72:23;74:2;77:1; 86:20;90:25;134:9; 135:18 impacts (4) 32:23;33:7;48:9; 151:22 implication (1) 123:15 implicit (1) 49:3 implies (1) 37:17 importance (1) 113:12 important (3) 68:19;91:20;101:19 INC (1) 1: include (8) 49:5;94:6;102:3; | | |

| | | | | |
|---|---|--|---|--|
| 124:18;162:21; 163:21;164:3;167:10 included (6) 22:8;94:22;108:10; 128:7;164:11,13 includes (8) 105:7;117:9; 140:25;142:10;144:4; 151:14;167:13;171:6 including (2) 15:5;102:5 inconvenience (1) 52:1 incorporate (2) 55:12;86:12 incorporated (5) 48:10;77:12;78:14; 126:8;127:12 incorrect (1) 156:17 increase (2) 57:22;59:13 increased (15) 44:23;51:24;52:1; 53:2;54:15,24;56:7; 57:13;58:22;59:22; 73:24;74:9;79:19,25; 80:21 increases (2) 59:19;78:23 independently (3) 12:9;148:4;151:15 INDEX (1) 177: indicate (4) 30:6;37:10;104:8; 154:14 indicated (3) 11:22;49:6;72:17 indicating (2) 46:14;149:17 indirect (3) 92:19;95:2;96:11 individual (7) 39:5;88:23;89:2,6; 118:19;148:6;161:20 individuals (56) 11:16;24:10;29:4; 35:18,24;36:2,17; 37:6,25;38:6,9,11,18; 39:7;42:25;48:6;65:5; 79:9,15;80:5;88:19; 99:5;106:24;107:4,5; 129:7;131:11,13,16; 137:12;140:10,16; 142:12;143:9;144:14; 145:11,13;146:6,9,16; 17:148:22;152:20; 160:14,14,15,25; 163:12;164:23;165:2; 17:166:20;167:1; 168:4;170:13,17 individuals' (1) | 67:4 individual's (1) 83:15 inflow (1) 108:17 information (12) 10:3;30:1;69:12; 71:21;99:21;105:8; 108:1;130:6,15; 138:19;153:17;154:1 inherent (1) 57:12 initial (4) 14:11,14;18:23; 177:9 in-person (2) 47:14;48:13 Insofar (2) 59:25;85:12 instance (1) 119:25 instances (1) 120:18 instruction (1) 19:4 insult (1) 43:21 intent (5) 27:23;28:5,9;62:11; 80:19 intention (1) 6:22 intentional (1) 27:20 interchangeably (2) 40:6,9 interest (2) 21:13;68:20 interested (12) 66:15;67:9;68:8; 72:20;73:15;75:9; 88:18;118:20;120:19; 166:15;167:6;176:17 interject (1) 10:1 intermediate (1) 66:17 internal (1) 18:16 Internet (1) 153:2 interpret (1) 80:9 interpretation (6) 23:11;51:14,16,19; 52:10;54:19 interval (5) 39:2,14,16,19,22 intervals (1) 39:1 intervening (1) 67:7 into (8) | 41:17;78:7,14; 108:18;126:8;139:4; 145:11;170:16 invoke (1) 66:18 involved (3) 8:20;10:7;23:21 involves (1) 172:19 issue (3) 24:22;147:16; 172:17 J jbelinfante@robbinsfirmcom (1) 3:10 jcreelan@jennercom (1) 2:9 Jenner (2) 1:17;2:3 Jennings (2) 24:4,22 Jennings' (1) 24:12 JEREMY (1) 2:8 job (1) 29:7 JOHNSON (1) 2:12 JOSH (5) 3:9;5:6;11:6;41:1; 64:9 Journal (1) 99:23 judgment (3) 43:3;92:10;134:19 July (1) 115:11 June (2) 97:11,16 jurisdiction (1) 119:16 K KAISER (1) 2:15 KATHRYN (1) 2:10 keep (1) 170:7 kind (3) 41:24;42:5;44:2 knew (2) 29:11;98:20 Knots (1) 173:1 knowledge (2) 28:14;98:21 known (4) 28:20,24;29:20; | 172:8 kwynbrandt@jennercom (1) 2:11 L LA (1) 171:24 label (2) 43:10;161:19 lack (2) 86:5;96:15 lacks (1) 101:7 laid (1) 89:4 large (3) 130:2;154:18; 158:18 largely (1) 141:8 largest (1) 108:17 last (10) 13:16,17;15:2; 18:18;44:14;45:3; 46:8;56:5,6;65:18 latter (4) 29:2;52:3;59:9; 105:15 Laurens (2) 122:24;123:1 law (3) 23:18,19,22 laws (1) 119:11 lawsuit (6) 9:24;12:2,8,18,21; 21:17 lead (4) 59:4,4;130:16; 132:6 leads (3) 128:22;141:23; 152:23 League (2) 23:12,25 learned (1) 53:4 least (8) 24:23;114:18; 115:15;125:9;151:21; 154:25;155:4;168:21 leave (2) 39:18;66:23 leeway (1) 19:8 left (2) 153:10;161:20 left-hand (2) 46:9;56:5 legal (6) 12:12;35:2;92:9,9; | 110:2;135:16 legally (3) 30:19;31:4;135:18 less (10) 34:22;38:11;53:1; 54:14,23;59:4; 141:24;145:20,20; 171:19 life (1) 83:15 likelihood (1) 64:1 likelihoods (1) 54:5 likely (3) 38:9,12;171:19 limitation (2) 86:25;89:12 limitations (2) 87:8;135:1 limited (2) 52:14;166:11 line (33) 19:15;31:18;34:4,7; 45:19,21;54:20; 61:19,23,25;69:12; 70:11;91:15;121:16; 19,22;122:3;123:5,7; 124:20;128:18; 129:15;138:8;145:24; 156:20,23;157:24; 158:8;159:3,6; 164:11,13;169:25 lines (6) 58:6,12,14;59:15, 17;103:17 list (1) 98:18 listed (4) 41:18;66:10;100:8; 163:1 lists (2) 42:21;111:11 literally (3) 36:7;37:5;146:12 literature (5) 58:4,11,11;171:16; 172:2 litigation (1) 75:12 little (2) 10:21;53:19 LITTLEFIELD (1) 3:4 live (4) 102:10,11,17;129:9 LLC (1) 3:4 LLP (2) 1:17;2:3 local (3) 25:4,9,15 locate (1) |
|---|---|--|---|--|

| | | | | |
|---|---|--|---|--|
| 123:1 located (1) 29:5 location (65) 25:5;32:2;35:8; 37:10;50:12;53:13; 57:15;58:24;59:6; 62:12;63:24;70:24; 71:8;74:3;76:18;77:7; 10,22;78:12;79:24; 80:2,24;81:4,15,17, 20;82:4,23;83:5,24; 84:1,2,10,13,25;85:7, 22,25;86:4,22;87:20, 21,24;88:1,5;89:14; 91:1,10;96:22; 112:21;122:9,18; 123:4;132:8;150:21; 151:22,23;152:4,5; 155:2,6;158:22,25; 160:21;169:10 locations (54) 22:22;24:2,21; 25:16;32:9;44:22; 47:22;50:6;57:7,9,22; 58:5,15,16,21;59:20; 61:2;76:16;78:8,14, 24,25;79:2,19;80:1,3, 21;86:21;88:16,20; 89:17;93:1,14;95:14; 113:19;116:3;117:22; 123:6;126:6;130:1; 137:13;138:9,15; 139:8,10,22;143:15; 150:12;155:13; 156:25;159:5,7,25; 160:1 long (8) 7:15;52:25;54:14, 22;58:14;93:5; 155:10;165:18 longer (1) 53:10 look (41) 10:25;11:15,17; 13:10;19:19;31:22; 43:6;46:7,25;49:9; 53:8,14;62:15;67:7, 18;72:18;75:6;77:14; 80:5;85:13;92:16; 99:16;100:7;107:25; 108:12;111:7;114:16; 117:3,6;118:18; 120:10;122:15; 123:22;130:24;137:8; 139:24;142:8;154:9; 155:18;167:5;172:16 looked (16) 7:6,9,10;16:1,13; 17:25;22:4;24:19; 42:5;49:18;50:9;55:5; 67:13;100:3;156:7; 166:4 | looking (36) 15:21;18:21;20:17, 25;22:2;30:21,24; 56:18;76:12;77:3; 86:20;89:19;102:14; 109:8;116:16,18,19; 120:2,6;124:13; 126:4;129:14;131:18; 132:5,16,24;133:25; 139:9,19;146:15,25; 147:8;149:5,12; 158:13;167:19 looks (21) 44:5;47:2,3;60:23; 79:8,14;92:1;101:23, 25;107:15;108:4; 112:18;118:15;124:4; 137:11;138:23; 147:22;150:22; 152:18;159:24; 168:10 Los (2) 44:6;46:10 lost (1) 170:7 lot (2) 19:8;119:9 low (2) 155:6,15 lower (4) 38:2;54:5;59:23; 121:17 Luncheon (1) 110:8 M machines (1) 24:17 mail (2) 47:24;48:14 mailed (1) 164:10 mail-in (2) 164:9,12 main (1) 120:24 majority (9) 118:6,7;137:11,16, 18;138:9;139:11,12, 21 makes (4) 6:8;9:20;30:13; 94:17 making (1) 28:7 Manatee (4) 60:19,25;61:15; 171:25 many (4) 22:9;46:14;121:11; 154:15 map (10) | 117:4,8,16;118:22; 119:23;122:16; 148:20;149:3,4; 177:24 March (1) 9:11 margins (2) 163:17,18 mark (9) 13:4;14:9;60:5; 69:1;98:4;102:21; 107:14;113:24; 117:13 marked (13) 13:8;14:12;43:13; 60:9;69:17,20,23; 98:8;102:24;107:23; 114:2;117:5,8 marriage (1) 176:16 material (5) 15:13;21:1,7,10; 56:11 math (1) 134:18 matter (6) 16:1;17:14;25:18; 27:23;81:19;176:17 matters (1) 12:12 may (35) 4:9;6:23;13:24; 16:3,16,19;17:4,13; 20:7,22;28:19,19,23, 23;29:20,20;40:5,9; 41:13;50:6;54:12; 58:1,1,21;63:25;64:7; 76:23;80:11,11; 94:18;103:22;106:1; 130:13;163:15;171:9 maybe (4) 9:10;52:9;89:23; 96:3 mayor (1) 172:20 McNulty (17) 37:15;43:8,12,24; 44:5;45:9;46:1;49:10; 51:9;54:1,10;55:18, 24;56:25;81:11; 172:7;177:10 McNulty-Brady (1) 50:20 mean (45) 12:7;16:8;17:7; 18:25;27:11;29:25; 32:1,20;37:22,24; 38:23;40:22;42:3; 45:17;56:21;63:1; 70:25;74:7,18;77:13; 78:21;85:15;96:21; 97:13;102:9;104:24; 113:7;116:1,5,13,15; | 117:22;118:4;122:22; 124:10;132:2,10; 134:15,16,17;139:7; 142:1;164:8;167:20; 173:3 meaning (1) 127:13 meaningful (4) 119:1;135:18; 152:3,13 meaningfully (1) 19:10 means (18) 36:14;76:4;81:13; 113:18;121:20;122:1, 3,17,19;134:14; 142:22;152:13; 154:11;158:8;163:1; 164:5,15;165:2 meant (3) 47:19;135:22;164:8 measure (1) 48:5 measures (1) 133:17 mechanisms (1) 38:4 meet (2) 139:10;145:1 mentioned (7) 9:17;15:24;38:7; 59:25;80:7;137:15; 148:10 mentions (1) 109:17 messages (1) 153:3 met (1) 7:8 methods (2) 49:4;99:12 MICHAEL (7) 1:14;5:1,24;111:3; 175:8;176:9;177:5 M-I-C-H-A-E-L (1) 5:25 mid (1) 13:24 middle (4) 68:9;106:5;113:6; 122:25 midterm (2) 68:12;100:4 midway (1) 61:18 might (2) 17:10;52:8 miles (1) 49:21 million (13) 64:25;65:14;72:5, 13,14,16;74:20,21; 75:3;162:6;163:9; | 169:8;170:9 mind (6) 15:11;43:5;61:16; 62:6;123:21;167:21 minor (2) 86:25;87:8 minus (1) 146:18 minuses (2) 101:20;148:7 minute (1) 154:4 minutes (1) 171:9 missing (2) 65:24;163:16 mistaken (1) 24:15 moment (1) 43:2 month (2) 13:16;83:18 months (8) 8:21;16:16;17:12; 83:19;96:20;97:18, 20,22 more (46) 21:22;34:22;38:8, 22;39:17,20;48:17; 50:17;51:21;58:5,16, 21;59:10;68:13,19; 69:11;74:11,18,23; 76:25;81:23;86:19; 87:13;88:11;99:8; 102:11;107:4;115:1, 17;116:15;121:20; 122:2,4;123:9; 136:11,22;141:23; 142:24;145:19;158:5; 159:4,6;161:6;172:6, 6;173:12 moreover (1) 49:13 morning (1) 5:5 most (6) 102:9,11,16; 111:25;121:13;149:6 move (14) 19:17;25:16;87:12, 22,24;88:11;107:4; 142:14;163:12;165:7, 9,25;166:20;170:15 moved (13) 42:4;50:7;53:15,18; 77:23;78:10;86:23; 87:18;88:23;89:2,15; 90:3;167:3 movement (4) 88:13,14;90:17,21 movers (5) 88:10;89:22; 140:24;142:11; |
|---|---|--|---|--|

| | | | | |
|--|---|---|---|--|
| 167:10 moves (1) 88:4 moving (13) 22:22;24:2,21; 47:22;50:12;89:8,17; 90:10;108:16,18; 157:3;166:21;167:16 much (2) 36:25;99:8 multiple (3) 38:18;133:17,21 | 12,15,18;146:6,8,15, 16;148:25;149:24; 151:14;152:20; 154:15,19;155:20; 156:15,25;157:2,4; 158:10,22,24;159:4,7, 25;160:1,8,14,20; 161:1,21;162:9; 166:17,22;167:8,13, 15,25;168:1;169:10, 15;170:17,20,24; 176:2,4,8 | noting (1) 113:15 notion (2) 39:14;61:11 November (9) 9:13;11:13;15:25; 16:14;17:4;76:8; 97:10,21;109:7 nowhere (1) 113:8 number (58) 7:17,20;8:21;17:11; 34:7;37:5;39:19;57:8, 14,22;59:20;61:20; 65:2;77:4;78:23,25; 79:2,19,25;80:3,21; 86:22;88:3,5,10,15; 108:16;113:21; 114:24;121:6;122:10; 123:4;124:8;128:21; 129:5;130:1;131:11, 13;137:2,3;138:6,10; 139:9;140:10;142:17; 149:23;150:24; 154:18;155:13,19; 156:23;157:15; 159:15;161:24; 162:25;168:1,16; 169:14 numbers (19) 19:20;39:24;47:4; 70:10;72:2;75:4;92:1; 103:3,5;106:10; 134:24;136:10; 139:20;141:19,20; 148:5;152:22;162:14; 163:19 numeric (1) 35:9 Numerous (1) 27:9 NW (2) 2:17;3:6 | 90:12;91:3,11;93:16; 95:8;99:25;113:14; 115:5;116:10,23; 118:9;119:3;122:11; 124:25;125:3;126:10; 128:24;130:20; 131:24;133:4;134:11; 136:24;139:13;143:6, 16;146:2;147:2,14; 149:9;151:24;152:6, 15,16;154:16;155:8; 159:8;160:2;165:10; 166:8,12;168:23 objections (2) 4:5;5:13 objective (3) 75:11;91:11,16 observations (1) 39:7 obviously (3) 109:6;122:21;127:9 occurred (9) 19:24;70:24;71:1,8, 9,15;81:21;95:15; 156:4 odd (1) 107:16 of2018 (1) 76:6 off (9) 7:20;47:17;69:4; 109:11;110:7;111:19; 153:11;173:14,17 offer (4) 25:13;28:8,13; 80:15 offered (1) 156:6 offering (2) 51:14;147:22 offers (2) 33:25;101:20 officer (1) 4:10 offices (1) 1:17 official (6) 1:;29:20;42:20,20; 110:1;167:15 officials (1) 28:19 often (2) 119:13;166:21 old (2) 77:22;78:4 older (1) 53:3 omission (1) 19:12 once (2) 87:13;88:11 one (48) 20:8,23;21:8;22:13; | 33:11;37:9;38:22; 39:9,10;49:5;54:11; 59:11;68:7,16;72:17; 77:4,18;78:21;83:18; 84:10,12;85:12; 87:10,18;94:3; 101:20,23,25;102:2; 103:4,4;105:17; 111:13;122:23; 126:12,14;127:22; 138:22;144:7;147:10; 148:1,7,9;158:5; 172:6,7,18;173:2 ones (4) 126:6;146:21; 168:17;172:10 one's (1) 84:15 one-to-one (1) 33:6 only (35) 6:12;38:8;39:9,10; 44:9;60:19;66:8,12; 69:11;80:19;94:11; 100:8,13;101:10,14; 104:22;105:2;132:3, 5,13,22,24;133:25; 134:2,24;140:25; 144:4;146:25;147:6, 8;148:3,8;162:21; 168:11;171:6 open (5) 58:15;106:20,21; 126:6;147:20 opened (1) 58:21 opine (5) 15:15;25:3,4;33:17; 35:2 opining (2) 100:10;145:23 opinion (9) 25:13;26:14;28:8,8, 13;29:10;31:3;63:2; 80:15 opportunity (1) 44:17 opposed (7) 37:6;76:16;80:18; 88:15;119:1;132:9; 133:3 opposing (2) 38:17,18 order (6) 30:11;37:1;44:20; 45:11,22;46:3 original (1) 9:19 ostensibly (1) 63:22 others (2) 44:24;45:7 otherwise (1) |
| N | next (2) 16:17;87:22 nodding (1) 6:7 non- (3) 89:17,21;157:3 non-Black (1) 138:8 nonetheless (1) 144:2 non-movers (8) 140:23,25;141:22; 142:23;144:4;148:25; 162:21;166:11 non-moving (21) 78:11;89:16;141:5, 9,13;143:21;145:9; 150:3;155:22,24; 156:24;157:1,20; 158:2,4,9,12;160:9; 162:6;168:6;169:18 non-neutral (1) 30:17 non-presidential (1) 62:25 nonuniformity (1) 119:24 normalized (1) 159:11 normally (1) 119:21 North (3) 114:5;123:6;149:6 NORTHERN (1) 1: notable (1) 75:5 Notary (2) 1:19;176:7 note (7) 20:1;36:15;113:4; 117:19,24;129:8; 135:23 noted (6) 13:15;96:13;100:6; 137:14;162:24; 173:21 Notice (1) 1:16 notified (1) 82:18 | O | | |
| name (4) 5:6,23;23:21; 131:11 named (1) 9:2 names (2) 36:17;117:18 natural (2) 44:19;68:14 nearly (1) 44:22 necessarily (10) 27:8;37:19;91:6; 98:19;118:11;119:8; 120:17;123:14;169:3, 4 necessity (1) 170:4 need (7) 6:10;56:9,11;72:1; 81:8;85:16;173:17 needed (1) 105:6 negative (1) 145:24 negatively (1) 126:22 net (1) 126:7 neutral (17) 29:24;30:8,12;31:4, 12,23;32:3,12;33:2,5, 15;34:5,10;35:11; 37:19,23;38:21 neutrality (2) 34:1;133:14 New (100) 1:18,18,20;2:6,6; 23:13,18,24;36:2,4, 12,13,19,19;57:2,6, 15;58:23;59:5;76:6, 14,17;77:5,6,9,10,20; 78:2,4,6;79:24;80:1,6, 14,20,24;81:4,14,16; 84:10;85:24;86:3; 87:20,21;88:4,16; 89:8;143:10,15; 144:2,15,20,22;145:1, | | oath (1) 4:11 object (4) 17:1;19:9;26:20; 111:15 objection (81) 17:22;18:12;31:13; 32:14;33:8,19;34:12; 35:13;40:19;41:4,20; 42:9;48:19;50:14; 51:11;52:19;54:16; 55:1;57:17;58:7;59:2, 7;61:5;62:8;63:3; 65:11;67:23;71:24; 73:1,17;74:4,15; 78:17;79:3;81:1;82:6; 85:9;86:7;87:2;88:6; | | |

| | | | | |
|--|---|---|--|--|
| 25:9 out (29) 31:20;32:8;38:12; 13:48;4,6,7,8;49:6; 65:13;82:13;83:10; 17:84;9;89:4,11; 90:10;94:1;101:19; 107:14,16;108:16; 112:3;113:5;129:1; 159:16;162:11;163:3; 166:16 outcome (1) 176:17 outcomes (1) 77:3 Outside (2) 92:5;128:8 over (12) 6:8;16:2,17;17:11; 41:8;62:2;64:19,25; 65:14;76:13;125:18; 163:23 overall (7) 117:3;135:11; 136:6;164:2,3;166:6; 167:1 own (3) 19:3;98:20;105:18 | 22:1;56:2;172:7; 173:1 papers (8) 21:19,21,25;37:24; 38:11;172:5,16,18 paragraph (88) 14:25;15:10,16; 22:19;23:3;25:21,24; 26:7,11;27:2,6,7; 37:14;43:6;44:15; 45:4;46:9;47:2;49:12; 12:50;21:51:1,3,7,10; 54:1;56:5;60:2;61:10; 10,18,20;63:21;64:18; 20:65;17;66:7;75:25; 76:24;86:14;87:1,10; 16:88;9;89:25;91:13; 15,21;92:16;94:1; 95:1;96:12,13; 100:18,23;101:3,4; 102:13;103:19; 104:12,17;105:12,13; 16,19,24;106:5;107:2; 13;108:2,14;111:8; 113:5,12;124:10; 137:15;138:25;140:2; 141:19;142:2,4; 143:2,5,19;162:3,18; 171:15;172:3 paragraphs (5) 92:24;93:11,22; 107:1;126:13 part (7) 18:18;21:23;50:8; 53:9;88:17;90:23; 96:15 particular (11) 23:17;24:9,11,18; 25:19;30:17;35:7; 37:3;38:6;116:13; 168:4 particularly (1) 156:7 parties (2) 4:5;176:15 partisan (4) 38:7;61:2,16;62:6 passage (1) 45:24 past (1) 16:3 people (35) 38:4;52:8,24;53:3; 54:22;57:14;65:14; 80:14;88:11;98:25; 102:9,11;108:16,18; 120:10,19;140:23,24; 142:14;144:19,22; 145:1,14,17;151:14; 162:15;166:15;167:6; 168:25;170:2,17,18, 20,24;171:6 per (9) | 112:1,1,11;113:19; 22;119:8;121:8,21; 122:5 percent (51) 14:6;32:24;34:7,8; 46:11,12,13,21,24; 65:20;66:2;70:3,12, 18;90:1,7;102:2; 112:20;114:8,9,12,20; 124:19;125:9;129:21; 137:14;138:24; 141:10,16;142:16,16, 20,21;143:4,13; 144:16,21,24;145:2, 15;146:7,7,19;157:3; 159:15;161:3;162:9; 168:5;169:9;170:21, 25 percentage (14) 42:1;46:20;111:23; 117:21;142:19; 150:25;156:25; 158:21,23;159:7; 160:18;169:13,17,20 percentages (8) 39:1;112:16; 114:13,14;140:11; 141:21;159:11,24 performed (1) 75:16 Perhaps (3) 52:10;59:13;109:10 period (17) 67:10;68:21;72:20; 73:9,23;75:8,13; 80:25;87:13;88:12, 24;91:19;94:6;97:1,3; 108:21;109:2 person (9) 8:8;40:17;48:18; 53:11;82:18;86:18, 23;164:12,16 personal (1) 98:21 personally (4) 18:7,20,25;98:14 persons (7) 42:1;49:19;141:2; 163:1;168:11,18,20 perspective (6) 31:7,11;32:13; 67:18;118:5;120:7 PhD (6) 1:15;5:1;111:3; 175:8;176:9;177: phenomenon (1) 156:3 phonetic (1) 173:1 phrase (4) 29:23;87:9;130:22; 136:8 phrased (1) | 126:21 physical (1) 128:6 pick (2) 87:14;122:24 picked (1) 89:13 pie (1) 114:22 pieces (1) 79:11 pinning (1) 96:7 place (71) 11:19;25:11;30:7, 18,23;34:23;35:19; 36:20;46:13;50:23; 51:4;53:1,5,14,17; 57:3;62:12;66:16; 76:3,6,15;77:2,15,19; 78:3,6;79:18;84:16; 88:25;89:2,8;91:14, 17;92:8,20;96:18; 100:13;112:12; 113:22;120:1,3; 121:9,21;122:5; 124:4;126:15,17; 127:12;128:11;131:5; 133:14;137:17,20,25; 138:3,7;143:22,23; 146:6,8,16,16;148:15; 149:25;154:19; 155:21;160:8;161:21; 167:8,25;168:1 places (65) 25:19;26:8;36:3,4, 12,14;49:19;51:24, 25;53:2;54:15,23,25; 79:16;80:6,11,15; 94:13,20;101:10,15; 112:16;117:1,2; 118:1,19;121:6,11,16; 129:7,20;131:13,17; 143:10;144:1,3,15,20, 23;145:2,12,15,18; 149:1,23;151:15; 152:21;154:15; 156:16,17;157:2,5; 158:11;160:15;161:1; 162:10;166:18,22; 167:13,15;169:15; 170:18,21,25;171:18 Plaintiffs (5) 1,;15;2:4,16;14:22 plaintiffs' (1) 42:14 plaintiff's (3) 12:23;16:20;18:23 pleadings (1) 12:17 please (26) 9:7;10:10;26:17; 32:17;33:22;45:18; | 52:21;56:2,15;61:19; 67:25;71:4;72:7;74:6; 79:6;98:17;124:2; 127:4;131:3;134:16; 144:6;148:17;150:17; 156:10;161:9;164:21 PLLC (1) 2:15 plot (1) 112:15 plotted (1) 112:9 pluses (2) 101:20;148:6 pm (3) 110:9;111:2;173:21 point (17) 34:3;35:9;45:17; 56:1;70:9;94:1;97:14; 101:19;109:9;113:5; 122:2;132:3;149:14; 153:1;156:22;158:7; 172:13 pointed (1) 76:23 political (2) 38:19;171:17 politically (3) 37:19,22;38:21 poll (2) 24:2,21 polling (240) 11:18;22:22;25:5, 11,16,19;26:8;30:7, 17,23;32:2,9;34:23; 35:3,19;36:2,4,12,14, 20;37:10;44:22; 46:13;47:22;49:19; 50:6,12;51:23,24; 53:1,2,5,12,14,17; 54:15,23,24;57:3,6,8, 15,22;58:5,15,16,21, 23;59:5,20;61:1,2; 62:12;63:24;66:16; 70:24;71:7;74:2;76:3, 6,14,15,18;77:2,6,10, 15,19,21;78:3,6,8,12, 13,24,25;79:2,16,18, 19,24;80:1,1,3,6,10, 14,21,24;81:4,15,16, 20;82:23;83:5,24,25; 84:2,12,16;85:22; 86:21,22;87:20,21,24; 88:1,5,16,20,25;89:2, 8,14,17;91:1,10,14, 16;92:1,7,19;93:1,14; 94:13,20;95:14; 96:17,22;112:11,16, 21;113:19,22;116:3; 117:22;118:1;119:25; 120:3;121:6,8,11,21; 122:5,18;123:3,6; 124:4;126:5,15,17; |
|--|---|---|--|--|

| | | | | |
|---|--|---|--|---|
| 127:12;128:11;129:7; 130:8,18;131:5,13,16, 20;132:7;133:1,14; 136:12,20,23;137:13, 17,19,24;138:2,7,9, 15;139:8,10,21; 143:10,15,22,23,25; 144:15,20,23;145:2, 12,15,18;146:6,8,15, 16,23;147:11;148:15; 149:1,25;150:11,21; 151:14,22,23;152:4,4, 20;154:12,15,19; 155:2,6,13,20;156:16, 17,25;157:2,4;158:10, 22,24;159:4,7,25; 160:1,8,15,21;161:1, 21;162:10;166:17,22; 167:8,13,15;169:10; 170:17,20,25 | 77:3;140:12 potentially (2) 151:21;173:15 pre (2) 92:12;95:6 precinct (12) 26:8;46:2;77:5,5,9, 20,21,22,24;78:3,4,5 precincts (5) 15:4;29:5;44:21; 117:21;156:16 precisely (1) 136:9 pre-clearance (1) 92:8 preferences (2) 38:5,14 premise (1) 120:12 preparation (1) 173:8 prepare (4) 7:3,16;8:1;117:10 prepared (2) 21:17;127:18 preparing (2) 8:18;11:1 presents (1) 137:10 preserving (1) 43:20 presidential (6) 62:19,24;68:13; 72:24;73:15;75:1 presumably (2) 87:23,25 presume (6) 14:15;40:25;53:3; 84:14;86:3;122:17 presumed (1) 42:6 presuming (5) 40:16;68:23;71:20; 83:4;144:6 presumption (1) 41:16 presumptions (1) 40:3 pretty (1) 121:10 prevented (1) 75:19 previously (1) 171:23 primarily (1) 128:17 principal (1) 21:13 principle (2) 37:7;38:16 print (2) 107:14,15 printed (1) | 109:16 printout (1) 108:11 prior (12) 14:16;21:16;22:22; 43:24;92:2,20;93:1, 14;95:15;96:22,25; 146:20 privilege (1) 5:14 privileged (1) 10:18 probably (7) 6:17;11:13;47:1; 89:23;103:23;121:10; 139:17 problematic (1) 30:19 problems (2) 24:16;101:6 Procedure (1) 5:12 procedures (2) 37:18;119:10 processes (1) 22:4 produced (1) 94:3 professor (1) 8:13 Profile (4) 102:24;114:18; 115:19;177:20 projects (1) 22:8 proportional (1) 117:20 proportionally (2) 48:17,18 proportionately (1) 35:5 propose (1) 5:13 proscribed (1) 139:11 provided (4) 19:24;30:1;44:16; 64:25 provides (5) 137:24;138:2,5,6; 171:17 providing (2) 51:19;52:10 Public (2) 1:19;176:7 published (1) 22:21 pull (1) 172:21 pulled (2) 20:8;69:4 purpose (7) 11:1;43:19;66:8; | 81:24;104:22;105:2; 118:22 purposes (7) 5:10,11;15:21; 35:16;69:10;80:22; 116:21 pursuant (1) 1:16 purview (1) 67:11 pushes (1) 147:21 put (5) 8:22;18:2;45:5; 64:14;107:20 | 124:5;129:25 racially-neutral (1) 57:23 RAFFENSPERGER (1) 1: raises (1) 63:6 raising (2) 63:9;94:7 random (1) 63:23 randomly (1) 44:23 rate (14) 24:9,10,16;36:10, 15,19,25;47:22;65:5; 92:7;125:21,22,24,25 rates (14) 36:1,16;38:3;47:15, 25;49:1,3;55:10;65:4; 92:1;131:5;138:20; 161:17;168:3 rather (1) 135:21 rationale (1) 80:7 reach (12) 16:22;18:1;25:12; 62:3;65:9;100:11; 128:10;129:13;130:7; 134:17;136:20;152:2 reached (2) 17:16;155:2 reaches (1) 35:3 reaching (2) 17:19;51:10 read (58) 7:5;8:6;10:11; 11:22;12:8,16,20; 15:10,13;22:19; 25:22;26:3,11,19; 29:15,17;32:18; 33:22,23;43:23;45:6, 8;49:11,21;50:24; 51:6;56:9,11,15; 60:15,17;63:14; 64:20;67:24;68:1; 72:11;73:7;79:7; 82:10;86:15;106:4; 113:6;114:12;118:2; 120:15;127:7;140:2; 143:2,20;150:2,11; 152:11;153:11;160:7; 162:2,4;173:6,7 readability (1) 153:19 readable (1) 153:23 reading (17) 14:19;45:2,3;49:22; 63:16;95:23;114:10, 21;125:25;127:22; |
| | | Q | | |
| | | quantified (1) 39:16 quantify (1) 30:13 quarter (1) 9:9 quarters (1) 22:11 quick (2) 25:23;100:7 quickly (1) 100:2 quote (2) 52:2;106:5 quotient (1) 39:20 | | |
| | | R | | |
| | | Rabun (9) 111:25;112:5; 113:13;114:1,4,8; 115:1,17;177: race (28) 24:13;46:10;48:16; 66:13;67:1;69:14; 90:7,11,17,21;101:7; 104:1,8,23;105:3; 106:20,24;114:19; 119:8;131:8,10; 140:6,9,18,18;160:8, 16;163:16 races (3) 66:9;67:4;145:5 racial (15) 30:8;34:1,21;36:1; 38:7;80:13;102:2; 105:7;119:19;124:8; 133:14;135:17;140:3; 148:14;161:19 racially (19) 29:24;30:7,12;31:4, 12,23;32:3,12;33:2,5, 15;34:5,9;35:10; 101:24;102:1,18; | | |

| | | | | |
|---|--|--|--|---|
| 144:8;149:2;150:23; 158:25;162:20;163:5; 173:5 reads (2) 44:15;101:4 ready (1) 161:25 real (1) 25:23 realize (2) 151:4;153:11 really (6) 12:4;34:25;44:10; 91:23;109:8;151:20 reason (12) 19:14;59:21;61:2; 67:13;68:20;75:6; 85:3;78:6;105:5; 125:12;133:11 reasonable (4) 85:5;6;86:2;88:24 reasoning (1) 54:21 reasons (3) 57:24;72:18;85:13 recall (16) 8:19;9:10;13:12,22; 17:3;19,23;21:24; 22:3;23:13;44:6,16; 47:16;73:3;171:24; 173:5 receive (6) 80:14;144:19; 145:1,14,18;166:21 received (18) 13:12,15,22;36:2, 12:42;12,13;144:14, 22;145:12;149:24; 151:14;158:10; 160:14,25;162:9; 166:17;167:8 received-new-polling-place (1) 167:12 receiving (1) 36:19 recent (2) 15:4;172:7 recess (1) 110:8 recognizing (1) 12:11 recollection (5) 11:11;14:19;21:20; 47:18;172:4 reconstruct (2) 13:25;17:9 record (26) 5:23;10:11;26:19; 29:17;32:18;33:23; 43:20;47:6;63:14; 67:3;68:1;69:6;72:11; 73:7;79:7;82:10; 110:7;111:19;120:15; | 127:7;141:8;152:11; 159:20;173:14,17; 176:12 Reduces (2) 79:1,1 reducing (1) 59:15 refer (7) 38:20;40:10;47:13; 57:1;92:19;96:11; 149:3 reference (5) 11:8;35:7;112:23; 117:17;132:4 referenced (2) 13:13;143:4 referred (11) 15:15;43:16;47:14; 60:7;94:24,25;95:2, 13;98:3;100:17; 127:20 referring (13) 47:6;74:8;76:20,22; 98:11;104:11,17; 107:18;123:7;142:3, 7;149:21;172:2 refers (2) 93:12;130:2 reflect (1) 150:20 reflected (8) 24:16,17;128:3,5; 130:16;153:18; 159:17;161:6 reflects (4) 34:19;141:12; 150:15;157:13 refresh (1) 47:18 regard (1) 28:10 regardless (1) 167:2 regards (1) 93:22 region (1) 108:18 regions (1) 108:15 register (2) 38:5,13 registered (70) 36:11;46:11;64:23, 25;65:21;66:9;76:2,5; 78:2,5;79:15;90:20; 102:17;106:9;112:11; 113:21;121:8,20; 122:5;123:9,11; 131:6,12,21,22; 132:11;133:2,3; 137:3,4;140:4; 141:14;143:21;145:9; 149:24;150:3;154:18; | 155:20,22;156:19,24; 157:1,4,15,20,21,22; 158:3,4,9,10,12; 159:12;160:9;162:7, 8,14,16,19;163:3,13; 165:2,8,22;168:6,21; 169:1,9,18;170:14 registrants (2) 54:4;141:25 registration (3) 23:19,23;106:10 relate (1) 119:11 related (1) 176:15 relates (7) 24:23;29:13,25; 47:21;91:9;99:22; 100:12 relevance (5) 88:3;93:20,23; 106:17;120:5 relevancy (1) 17:1 relevant (9) 55:7;72:23;86:19; 88:15;109:1;118:25; 119:2;120:17;152:14 reliable (1) 99:11 relied (1) 108:1 rely (2) 43:2;148:8 remain (1) 84:2 remains (2) 40:17,22 remember (5) 9:16;11:12,21;97:5; 126:13 removed (1) 11:16 repeat (4) 72:7;79:5;152:10; 165:15 rephrase (4) 7:1;122:14;139:15; 152:8 report (170) 7:5,7,16;8:2,6,19, 23;11:2,8;12:4,10,14; 13:1,6,8,11;15:14; 17:8,11;19:18;20:11; 21:16;22:17,23;25:2, 7,12,17,21;27:14,17, 22;28:4,7,12,17;29:9, 18,23;30:1,3,6,16; 32:1;33:18,25;35:3,8, 16;36:7,8;37:13,15; 38:24,25;40:3,25; 41:17;43:7,16,24,25; 44:5,12;47:7;48:15, | 23;49:10;50:8,20,21; 52:24;54:2,8;55:9; 60:3,12,16;62:1,3,10; 63:20;64:16;65:9; 66:1,15,18;70:23; 71:7;74:14;75:17; 76:1,12,17,19,21; 79:11;80:12,23; 91:12,18,24;93:11,21; 94:4,22;95:24;96:5, 15;97:5,9;98:4,8,10, 16,22;99:6,11,13,20; 100:11,12,14,22; 103:6,20,24;104:14, 21;105:1,6,23;106:6; 107:3,7,17;108:7,22; 109:6,15;111:8,22; 116:3,21;117:1; 118:17;120:25;121:3; 127:18,22;128:3; 133:12;134:23;135:7, 15;142:5;147:25; 148:3;150:6,10,19; 152:2,18;156:3; 157:12;171:15,23; 173:8;177:8 reporter (5) 6:9;77:8;98:6; 144:9;176:7 reporting (1) 146:5 reports (8) 109:13,23;124:3; 131:4;138:20;148:21, 25;161:16 reprecinctd (3) 37:25;38:10;54:4 reprecincting (15) 26:6,13,15;27:4,11, 13,16;28:10,15,20,24; 29:14;37:18;61:14; 62:4 represent (11) 5:7;13:5;14:21; 69:3;99:23;124:23; 125:7;143:5;162:13; 168:1;169:16 representative (1) 102:8 represented (2) 141:10;161:23 represents (17) 112:14;121:4,5; 123:25;125:8;131:1; 140:1,21;143:8; 148:18;156:11;161:8; 164:19;165:16;169:7, 11,17 request (1) 111:21 required (3) 82:12;83:10,16 reread (5) | 32:16;73:6;120:14; 127:2;132:19 research (3) 81:14;101:21;119:9 reserved (1) 4:6 reserving (1) 5:13 residence (1) 77:23 resides (1) 41:1 respect (2) 34:18;94:12 respective (1) 4:4 respectively (1) 137:19 response (1) 10:4 restate (3) 10:9;26:18;68:7 restriction (1) 142:13 restricts (3) 142:11;164:23; 170:2 result (4) 34:19;50:4;136:2; 151:18 results (14) 34:24;50:23;51:4, 15;69:7,16,19,22; 100:21;124:3;137:10; 177:.,15 resumed (1) 111:4 review (1) 134:18 reviewed (1) 7:5 rid (1) 142:14 right (63) 8:16;22:12;23:8; 31:2;39:25;40:23; 42:18;49:2;51:3,20; 53:13,19;55:18; 58:19,25;59:6;60:20; 61:21,23;62:20; 69:25;71:17;74:25; 77:15;79:17,20; 81:10;89:15;92:4; 93:2,15;98:1;99:9; 100:23;103:15; 104:23;106:16;110:6; 112:13;114:22; 118:16;122:10; 123:22;124:19; 125:19;128:3;138:21; 139:1,24;140:19; 141:1,18;144:5; 149:3,16;151:1; |
|---|--|--|--|---|

| | | | | |
|---|--|--|---|--|
| 153:23;154:2;157:14; 159:13;161:2;163:8; 165:4 right-handed (1) 50:22 rights (2) 12:15;119:11 ROBBINS (1) 3:3 role (1) 55:8 roll (4) 40:5,5,11,24 rolls (1) 11:17 ROSS (1) 3:3 rough (1) 77:16 roughly (1) 9:8 rounded (1) 171:1 rounding (2) 140:12;144:24 row (3) 114:11;162:4,5 RPR (1) 1:19 rule (1) 119:15 Rules (2) 5:12;6:5 run (1) 166:25 | scientifically (1) 101:19 scope (2) 31:24;67:12 screen (1) 24:19 se (1) 119:8 sealing (1) 4:13 search (23) 55:19,23;56:7,20; 57:1,5,13;58:22; 59:12,22;81:12,17,25; 82:1,11,17;83:1,7,8; 84:3,7,11,14 second (10) 13:24;45:19;51:23; 61:9,10;86:15;103:1; 104:3;129:14;143:18 Secretary (2) 1:7;69:5 section (6) 15:8;48:24;55:4; 76:19,21;93:24 sections (1) 22:13 seeing (1) 158:20 seek (2) 58:15,23 seem (1) 6:19 semester (1) 22:10 Senate (1) 23:21 sense (7) 6:20;9:21;18:3; 30:13;38:2;110:3; 139:6 sentence (16) 15:2;46:17;51:23; 52:4;53:9;56:7;63:21; 64:3;65:18;80:8; 141:20;143:3,5,19; 171:16;172:11 separately (1) 66:20 SESSION (1) 111:1 set (7) 30:6,17,19;96:17; 141:24;142:11; 176:10 several (10) 6:18;29:21;68:6; 98:25;122:16;147:22, 23;148:13;161:18; 172:16 sfink@kaiserdilloncom (1) 2:21 shaded (2) | 118:6;149:16 shading (1) 117:20 Shelby (36) 67:10,15;68:21; 72:20,23,25;73:9,14, 22;75:8,13;91:1,10, 19,22;92:2,3,12,20; 93:1,15;94:6,8,21; 95:6,7,16,17,25;96:9, 17,22,24;97:4,11,14 shift (1) 34:8 Shorthand (1) 176:6 show (15) 14:9;37:24;61:7; 68:25;98:17;102:21; 113:23;116:12;117:7; 118:25;137:9;141:21; 142:2;145:6;155:12 showed (1) 164:5 showing (1) 118:20 shown (1) 123:17 shows (15) 70:2,11;112:16; 114:7,18;119:23; 121:13;145:8,17; 153:17;154:17; 156:12,14;165:5,7 signed (1) 4:9 significant (8) 50:2,13;57:14;65:2; 115:3,21,24;145:25 significantly (2) 46:21;115:17 Similar (3) 6:7;62:4;148:19 similarly (2) 145:4;146:14 simply (5) 36:16;88:8;113:15; 128:20;129:6 single (2) 133:21;134:21 sitting (1) 123:24 situation (4) 29:3;31:8;39:10; 148:8 six (6) 13:17;64:23;65:4, 13;96:20;97:17 size (2) 118:13;157:11 slightly (2) 129:18;168:13 slippage (1) 163:15 | slow (1) 144:10 small (1) 163:19 Smith (9) 37:16;60:4,8,15; 62:14;64:15;172:6, 19;177: so-called (2) 15:22;17:21 solely (1) 133:10 somebody (9) 8:4;40:15;41:11; 77:4;80:23;88:4; 89:13;98:21;164:10 someone (13) 7:25;40:4;43:1; 54:13;76:14;81:4,16; 87:12,18;164:5; 165:5,7,20 someone's (1) 84:25 sometime (3) 90:3;96:24;143:14 sometimes (1) 120:10 somewhere (4) 8:14;103:24; 125:15;158:15 sorry (36) 20:19;23:2;26:24; 28:2;33:21;40:7;45:1, 21;47:11;60:22;68:5, 5;72:10;76:9;79:1; 82:19,20;94:16; 103:7;105:1;112:22; 113:3,4;115:7;120:8; 123:8;124:11,18; 125:5;138:4,16; 144:11;155:4;165:15; 169:6;170:11 sort (3) 12:5;129:2;167:5 sound (1) 64:22 source (3) 99:21;100:4,8 South (1) 108:15 southwest (1) 149:5 speak (1) 94:9 speaking (2) 80:4;129:25 speaks (2) 34:1;119:5 specific (1) 22:25 specifically (6) 21:18,21;76:25; 93:21;107:2;150:7 | specify (1) 126:14 speculating (1) 75:23 spell (1) 5:23 spoke (1) 148:24 spoken (1) 12:24 spreadsheet (2) 153:22;154:1 ss (1) 176:3 St (7) 37:16;60:4,8,15; 62:14;64:15;177: standard (1) 39:17 standing (2) 130:12,15 start (7) 8:18;30:3;62:2; 64:17;73:9;76:13; 163:23 started (3) 8:22;45:3;73:5 starting (4) 45:6;48:24;83:17; 106:4 starts (9) 19:20;20:2;25:21; 44:14;45:21;64:18; 94:4;99:19;100:24 State (29) 1:7,20;5:22;23:18; 25:9,14;26:15;27:20; 28:6,13,18;30:9;41:1; 42:12,20,20;43:1,5; 76:2;92:6;114:19; 119:24;122:25; 139:20;147:11; 148:21;149:6;176:2,8 stated (2) 91:12;93:3 statement (8) 52:14;54:19;56:10; 59:24;63:20;77:25; 101:3;130:3 STATES (5) 1:1;22:7;27:2; 110:4;119:16 State's (3) 42:24;43:3;69:5 statewide (8) 118:15,18;143:12, 13;159:15,22,23; 160:12 stating (2) 88:9;107:3 stations (1) 63:25 Statistical (11) |
| S | | | | |
| same (25) 13:21;17:22;55:22; 56:19;75:20;83:3,18; 87:24;88:19;89:10; 107:19;129:14; 140:22;141:2;146:14; 152:15,22;154:10; 155:1,3;156:18,23,25; 163:4;168:19 sample (5) 39:6,7,10,12;130:3 SARAH (2) 2:20;9:2 saw (3) 108:15,17;153:3 saying (7) 29:4;53:21;57:1; 85:16;133:24;163:7; 168:14 scale (1) 35:10 scholarly (1) 107:9 science (1) 171:17 | | | | |

| | | | | |
|---|--|--|--|---|
| 21:14;31:6,11; 32:13;33:13,25;39:4; 101:17;106:17;118:5; 125:12 statistically (4) 50:1,13;65:1; 152:14 status (3) 137:12;141:6;160:9 statute (12) 15:7,17,23;16:2,7, 11,24;17:18,21;18:10, 22;19:5 stay (2) 38:19;63:19 stemmed (1) 105:19 Stephens (14) 111:24;112:4; 113:11,12;114:1,4,9; 115:1,16;154:4,10; 155:3,5;177:23 Stewart (11) 149:7,22;150:11, 20;151:2,9;155:4,5, 12,22;156:4 still (14) 19:22;21:2;31:10; 32:12,25;33:1;41:1; 55:15;76:17;92:8; 112:20;126:8;132:16; 135:23 STIPULATED (3) 4:3,8,12 STIPULATIONS (1) 4:1 stop (2) 125:11,14 Street (3) 2:17;3:6;89:3 stretch (1) 43:22 strike (3) 18:18;62:2;76:13 strikes (1) 19:14 struck (1) 109:1 struggle (1) 10:20 student (1) 8:10 studied (4) 21:18;37:15;82:5; 86:9 studies (2) 90:20;171:22 study (21) 16:5,8;37:16;42:25; 44:17;47:21;50:17; 52:14,17;53:8;63:2; 73:22;81:11;86:12; 90:17;92:7;109:2,11; | 120:10;154:8;155:1 studying (5) 30:23;54:10;73:14; 89:16;167:6 subject (5) 11:20;22:25; 136:22;140:12; 153:19 Subscribed (1) 175:12 substitute (1) 53:4 successful (1) 65:19 sufficient (2) 147:9;172:12 sufficiently (2) 128:21;130:2 suggests (4) 26:14;27:2;58:4; 61:13 sum (1) 140:11 summary (1) 77:17 super- (1) 139:12 superintendent (1) 60:24 supermajorities (1) 138:23 supermajority (2) 138:15;139:21 supplement (1) 109:18 supplied (2) 10:3;35:17 suppose (2) 58:17;60:1 Supreme (1) 73:16 Sure (54) 5:24;7:23;8:21;9:8; 13:18;14:2,7;26:25; 27:1;28:7;30:25;40:7, 23;42:15;45:1,3,19; 51:2;52:11,23;53:23; 55:15,16;56:13,18; 58:13;61:9,21,22; 72:3,9;75:2;82:14; 87:6;89:5;92:11,13; 94:19;95:10,18; 104:7;106:19;115:25; 123:19;127:5;132:3; 144:17;146:13; 149:11;150:18;153:6; 158:6;163:18;166:19 surprise (1) 74:22 survey (2) 109:17,20 suspicious (1) 96:8 | sworn (4) 4:9;5:3;175:12; 176:11 system (3) 20:15;23:23;53:4 T Table (96) 38:25;55:9;63:8; 102:14;111:9;123:23, 25;124:3,15,17; 125:6;127:20,23; 128:5,6,11;129:15; 130:7,16,24,25;131:4, 19;132:4,24;133:11, 25;134:3,8,25;135:2, 25;136:11;137:8,9, 10;138:14,16,17,18, 19,20,22;139:25; 140:1,3,8,19,20,22; 141:11,11,21;142:9, 10;144:6;145:6,7; 146:25;147:6,8; 148:4;159:14,21,22, 24;160:5;161:6,7,12, 16,23;162:21;163:21; 164:1,19,22,22;165:1, 5,7,16,17,18,21; 166:5,14;167:20,23; 168:10,13,20;169:24; 170:1,1,9 tables (6) 108:10;135:7; 139:5,19;142:8; 146:20 takeaway (1) 145:7 talk (8) 6:7;40:2;52:7; 55:19;116:2;135:9; 163:20,25 talked (6) 68:15;81:10;98:21; 163:17;167:25; 171:22 talking (8) 32:5;44:3;53:20,22; 55:24;66:6;105:12,17 talks (4) 29:23;56:7;90:1; 99:18 tallest (1) 112:5 TASSITY (1) 2:12 teaching (3) 21:2;22:10,13 technical (1) 63:22 Technically (1) 37:12 tells (1) | 158:1 ten (4) 61:23;87:19;126:6; 171:9 tend (1) 86:10 ten-minute (2) 153:5,7 term (16) 29:24;30:2,5,11,24; 38:1,22;40:12;48:12; 51:18;56:2,20,23; 79:13;91:14;110:2 terms (7) 29:21;40:6;55:20; 96:7;99:11;109:5; 155:1 test (1) 41:25 testified (5) 5:3;23:1,4;90:24; 111:4 testify (3) 14:24;15:3;151:10 testimony (2) 24:23;176:12 Texas (1) 23:9 theory (1) 22:16 therefore (4) 38:15;59:22;89:7; 148:7 Third (5) 1:18;2:5;11:20; 70:2;91:15 thoroughly (1) 50:10 though (2) 33:2;122:8 thought (2) 8:6;121:12 three (4) 23:3;46:15;68:25; 77:3 Thus (1) 63:22 ticket (1) 69:14 times (5) 6:18;86:23;87:19; 88:3;118:17 title (1) 108:23 titled (1) 100:3 tjohnson@jennercom (1) 2:13 today (2) 6:18;123:24 today's (1) 7:4 told (1) | 98:22 tomorrow (1) 21:3 took (1) 162:20 top (15) 7:21;19:20;20:14; 46:23;47:17;69:12; 70:11;124:20;128:17; 138:8;145:24;162:4; 164:11,13;169:25 topics (1) 10:16 total (2) 69:13;96:16 totality (2) 96:17;136:4 totally (5) 26:25;52:11;53:23; 55:16;82:21 touches (1) 119:9 tough (1) 153:11 town (1) 87:25 tracks (1) 90:10 training (1) 6:21 transparent (1) 106:22 transportation (1) 55:19 travel (1) 56:8 treat (1) 81:3 trial (1) 4:7 triangulation (2) 133:19;148:11 trick (1) 39:3 tried (1) 117:14 triggered (1) 105:22 true (6) 27:24;53:16;63:17; 71:2,21;176:12 truly (3) 39:3;47:17;109:4 try (11) 7:1;8:5;17:9;29:7; 49:17;58:14;71:5; 93:10;108:12;122:14; 136:8 trying (21) 11:11;13:25;30:12; 32:7;33:4;43:20; 47:18;56:18;67:2; 73:22;75:7;82:22; |
|---|--|--|--|---|

| | | | | |
|--|--|--|---|---|
| 86:24;89:11;90:25; 106:20,22;112:3; 118:14;135:9;147:24 turn (14) 13:19;14:20;22:17; 25:20;38:12,13;49:6; 50:19;64:16;75:25; 103:19;121:2;148:16; 171:14 turned (7) 48:3,6,7,8;162:10; 163:2;166:16 turnout (24) 38:3;49:1,3;51:25; 55:5,10;59:5,23; 67:19;69:13;70:3,12, 17;71:22;73:25; 161:17;163:20,22,23, 25;164:2,5,15;168:3 turnouts (2) 44:18;74:9 turns (1) 89:21 two (25) 22:13;23:2;34:7; 38:17;39:24;45:23; 75:4;83:19;87:18; 88:20;92:18;93:13; 94:10;95:1;103:3; 113:16;114:12; 145:11;146:10;149:8; 159:18;160:13; 170:16;172:8,12 type (3) 137:24;138:2,7 types (1) 68:17 typically (1) 109:10 typo (1) 106:13 | 96:16 understate (1) 88:12 Understood (4) 8:17;12:6;56:24; 120:13 undervote (1) 24:9 uniform (1) 119:16 uniformity (1) 119:18 unit (1) 120:9 UNITED (2) 1:1;22:7 universe (1) 124:14 up (17) 20:24;87:14;89:13, 24;94:10;97:7;102:4; 103:22;112:2;119:17; 130:5;138:1;141:16; 142:17;164:6;167:11; 171:10 upper (1) 114:22 use (29) 5:15;15:6,21;16:6, 10,22;17:20;18:8,21; 19:5;22:18;30:2,5,24; 35:19;38:4;40:5,13; 48:12;56:1,22;66:12; 67:1;87:8;91:14; 103:5;110:2;115:20, 23 used (10) 42:24;53:11;54:13; 66:7;96:1;124:14; 126:18;127:14,15; 137:15 Use-It-Or-Lose-It (9) 15:16,22;16:6,10, 23;17:18,21;18:9,22 Use-It-Or-Lose-It' (1) 15:7 uses (2) 29:23;105:1 using (10) 30:11;35:17;36:4; 38:1;41:7;79:13;87:9; 103:10;107:10;130:6 usually (1) 118:20 Utah (1) 8:14 | variability (3) 118:21,25;120:11 variable (1) 167:12 variety (2) 49:7;108:9 various (3) 75:17;131:6;140:9 vary (1) 118:12 Veasey (1) 23:7 veracity (2) 96:5;150:9 verify (1) 100:20 version (1) 111:10 versus (9) 23:13;24:5;31:4; 33:15;47:15;88:4; 121:21;131:22;152:4 virtue (2) 89:7;166:21 vitae (2) 19:19,23 voice (1) 38:20 vote (39) 24:15;38:12,13; 41:2,8,19;42:2,7; 46:12;47:23;48:4,6,7, 8,14;58:24;77:6; 80:23;81:23;82:4,13; 83:11,17;84:10;85:4, 7,21,21,24;86:1,5; 113:8;162:11;164:6; 165:3;168:6;169:9; 170:14;171:19 voted (20) 42:25;46:12,13; 164:24;165:3,6,8,18, 21;166:5;167:1; 168:8,11,21;169:2; 170:3,5,21;171:1,6 voter (79) 11:17;23:8,19,23; 37:4,9;40:4,5,11,11, 15,18,24;41:12,18; 42:1,7,11;43:2;44:18; 46:20;59:4,23;66:6,8, 12;67:1,19;70:3,12, 17;76:5;77:20;78:2,5, 10,11;81:14,19;83:2, 3,23;84:5;85:2,5,7; 90:3;93:25;96:23,25; 97:8,21;101:7; 103:25;104:8;105:2, 3;106:9,11,12,14,25; 131:7,9,21,23;140:6, 13,14,17;141:3,3,13, 15;145:10;155:24; 160:10;168:8;169:20 | Voters (102) 23:12;24:1;29:12; 36:11;42:21;44:24; 46:15;47:23;48:3,16; 58:23;59:4;64:24,25; 65:21;66:10;74:12, 18,23;79:15;88:16; 89:16,18;102:17; 104:1;106:9;112:11; 113:7,22;116:4,8; 120:5;121:8,20; 122:5;123:11;128:23; 129:17;130:4,9,19; 131:6;132:11;133:2, 3;134:10;136:11,13, 22,23;137:3,4;140:4, 13;141:9,14;143:21; 145:9;146:25;147:13; 149:24;150:3;154:18; 155:20,23;156:15,19, 24;157:2,4,15,20,21, 22;158:3,4,9,10,12, 22,23;159:4,6,12,25; 160:9,18,20;161:22; 162:7,12,14;163:2; 165:1;166:4;167:24; 168:6,19;169:8,19; 170:9;171:18 voters' (1) 90:21 voter's (5) 64:1;76:3;104:8,23; 105:7 votes (4) 48:17;70:19;85:2; 164:1 voting (35) 12:15;24:10,16; 44:17,21,23;46:2; 47:14,16;48:12,14; 49:4;50:23;51:5;53:4, 5,5;54:5;58:6,12; 63:7;67:19;70:23; 77:2,14;82:3;83:24; 84:4,25;86:4;119:11; 122:9;157:13;169:20; 171:18 vs- (1) 1: W waiting (1) 68:3 waived (1) 4:14 walk (2) 130:25;169:24 walking (1) 53:12 Warren (10) 91:25;92:17,23,25; 93:12,20;95:5,13; | 96:9;100:21 Washington (1) 2:18 way (31) 6:24;18:20;20:9; 24:18;27:12;30:2,5; 36:5;39:18;48:2; 51:20;53:18;65:7; 71:6;73:13;83:6;87:6; 91:6;93:11;99:8; 107:16;118:2;130:23; 133:8;136:19;139:18; 147:10;155:11; 159:18;167:14; 176:16 ways (4) 44:22;49:7;77:18; 161:18 website (2) 69:5;107:12 weeks (1) 13:17 what's (10) 15:15;22:15;31:4; 81:12;93:19;112:6,8; 125:2;151:8;160:23 whenever (1) 81:16 white (60) 32:10,23;36:15; 48:15;101:11,16; 107:5;114:8,9,11,20; 115:2,18;116:20; 118:7;122:17,21,24; 125:10,21,23;129:22; 131:22;132:9;133:3; 134:7;136:11,21; 137:3;141:9,24; 142:15;144:18,21; 145:16,19;146:7,9; 154:11;156:18;157:4; 158:2,9,23;159:6,12; 160:19;161:3;162:6, 25;163:2,9,11; 164:11;168:5;169:8, 18,18;170:9,15 Whites (4) 31:9;36:22;141:15; 142:24 whose (11) 106:10;126:17; 129:7;131:13,16; 143:21,23,25;156:22; 171:18;176:10 WINBRANDT (1) 2:10 winner (1) 38:16 withdraw (1) 50:16 Withdrawn (1) 43:5 within (6) |
| U | | | | |
| uh-uh (1) 6:6 Ultimately (3) 30:14;33:10;34:16 Um (1) 113:2 uncertainty (2) 39:11,13 unclear (1) 10:21 uncomfortable (1) 53:19 under (7) 5:11;61:23;87:19; 137:22;140:9;150:23; 162:17 under- (1) 24:15 underestimating (1) | valid (3) 140:6,17,18 valuing (1) 39:20 V | | | |

| | | | | |
|--|---|--|---|--|
| 57:13;77:12; 116:19;127:17;136:2; 176:7 without (5) 19:2,3,11;35:7; 123:5 Witness (105) 1:15;5:2;10:9,12; 11:7,10;13:7;14:13; 17:3,23;23:4;26:2,17; 24:29;15,18;31:15; 32:16,19;33:10,21,24; 34:14;35:15;40:21; 41:6,23;42:11,16; 47:11;48:21;51:13; 52:21;55:3;56:14; 57:19;58:9;59:9;61:7; 62:10;63:5,15;67:24; 72:1,12;73:3,8,19; 74:6,17;78:19;79:5,8; 82:8,11;85:11;86:9; 87:4;88:8;90:14;91:5; 93:18;95:10;100:2; 104:11,16;113:15; 116:12,25;118:11; 119:5;120:16;122:13; 126:12;127:4,8; 129:1;130:22;132:1, 20;133:9;134:13; 137:1;139:15;143:8, 18;144:11,13;146:4; 147:4,15;149:11; 152:8,12,17;155:10; 159:10;160:4;165:12; 166:14;168:25; 173:19;176:10,13; 177:4 Women (2) 23:12;24:1 word (7) 27:5;35:20;49:13, 14;106:22;115:23; 137:16 words (10) 12:1;51:9;57:7; 81:22;82:1;87:22; 141:1;142:13;160:19; 163:23 work (5) 10:7;12:25;43:21; 107:9;119:22 worked (1) 8:14 worst (1) 153:21 worth (1) 121:12 wrapped (1) 78:7 wrapping (1) 171:9 write (4) 81:12;134:2,23; | 148:3 write-in (3) 164:4,8,9 written (5) 17:10;18:4;22:1,24; 60:19 wrong (3) 76:24;87:12;106:22 wrote (2) 7:7;56:11 Y yards (3) 49:22;50:1,13 year (8) 16:3,17;62:20,24, 25;66:17;97:18;109:8 years (1) 75:1 yesterday (1) 7:8 yield (1) 135:10 York (8) 1:18,18,20;2:6,6; 176:2,4,8 Z zero (6) 84:11;128:20,21; 129:12;150:25; 155:14 0 00005 (1) 32:24 034 (1) 49:21 08 (3) 135:11,22,25 1 1 (13) 13:4,8;20:10;38:25; 47:7;54:3;64:17; 111:9,10;112:5,9; 115:11;177:8 1,625 (1) 138:10 1.2 (1) 170:9 1:18-cv-05391-SCJ (1) 1: 10 (21) 25:22,25;26:1;47:2; 55:9;107:15,22; 161:6,7,12,16,23; 162:21;163:21;164:1, 22;165:7,18,21; | 168:20;177:21 100 (3) 66:2;124:19;140:11 10022-3908 (1) 2:6 101 (1) 107:1 102 (3) 107:1,2;177: 107 (1) 177:21 1099 (1) 2:17 11 (23) 13:10,13,15;37:13; 43:7;54:2;60:3;97:20; 98:5;113:24,25; 114:3;115:8;164:19, 22;165:5,16,17;166:5, 14;167:20,23;177:22 112 (3) 111:8;113:12; 124:14 113 (1) 177:22 114 (1) 113:5 115 (2) 44:14;45:4 116 (4) 44:12;45:5,20;56:4 117 (2) 46:8;177:24 119 (1) 49:11 12 (13) 63:17,18;91:21; 117:4,8;134:7; 135:10,21;149:4; 168:10,13;170:1; 177:24 12:01 (1) 110:8 12:36 (1) 111:2 125 (3) 102:13;124:7,10 126 (2) 50:20;52:23 13 (5) 91:21;169:24; 170:1,9;177:8 136 (1) 137:15 13th (2) 14:4;24:13 14 (15) 22:19;63:17,18; 66:16,19,24;67:13; 68:8,11,14,18;72:21; 121:9;152:21;177:9 141 (1) 138:25 | 142 (2) 61:9;63:19 146 (1) 140:2 149 (2) 141:19;142:4 14th (3) 2:17;3:6;14:4 15 (1) 26:7 150 (3) 143:2,5,19 159 (1) 156:12 16 (7) 25:21,24;26:11; 27:2;66:19,20;68:9 168 (1) 162:20 169 (3) 162:3,18,24 16th (1) 109:7 17 (5) 37:14;43:6;54:1; 60:2;97:22 18 (20) 13:11;38:24;64:19; 66:20,25;67:14;68:8, 11,14,18;72:21; 121:9;143:4,13; 145:10;152:21; 157:18,19;162:10; 168:7 182 (1) 171:15 19 (1) 64:19 19.81 (1) 126:2 2 2 (21) 14:10,11;63:8; 98:25;102:14;112:14, 15,23;123:23,25; 124:15,17;125:6; 127:20,23;128:5,11; 129:15;130:7,16; 177:9 2,172,086 (4) 163:1,3,11;168:18 2,596,947 (1) 70:19 2.1 (3) 162:6;163:9;169:8 2.6 (2) 72:16;74:19 2.76 (2) 128:19;129:12 2:26 (1) 173:21 | 20 (1) 144:23 20.36 (1) 126:2 2000 (3) 103:7;106:9;131:7 20005 (1) 2:18 2000s (1) 172:21 2002 (1) 46:10 2003 (5) 44:5,16;49:20; 54:11;171:25 2005 (1) 173:1 2008 (1) 157:16 2010 (10) 102:23;103:4,6,14, 15;114:17,19;115:12, 19;177: 2011 (3) 43:9,13;177: 2012 (6) 62:15,19;63:7; 93:25;94:14;150:22 2013 (3) 73:11;96:20,24 2014 (95) 27:4;29:13;46:19; 62:16,20;65:1,21; 66:16;67:4,6;69:9,23; 70:16;71:1,9,22; 73:10;74:20;76:4; 81:21;82:24;83:24; 85:1,21,23;86:4; 87:10;90:3,4;94:4,8, 14;96:10,23,25;97:8, 10,19,21;100:3; 101:7;106:18,21,25; 112:12,17;113:22; 122:6;126:18;127:15; 140:5,14;141:3,14,22; 143:14,24;145:10; 149:1,25;155:14,21; 160:10;161:22;162:7, 10,12,16;163:4,10,13; 164:24;165:1,3,6,8, 19,21,22;166:1,6; 167:1,24;168:7,7,18, 21;169:1,7,8,19; 170:3,14;171:6;177: 2015 (2) 108:24;109:9 2016 (43) 66:6,7,12,17;67:8, 20;69:8,20;71:2,15, 16,22;72:19;73:25; 74:12,23;75:20; 81:22;82:25;83:2; 84:1,5,24;85:2,3,13, |
|--|---|--|---|--|

| | | | | |
|--|---|---|---|---|
| 23,25;86:4,10,12; 90:9;104:22,25; 105:2,6;106:11,18; 108:24;109:7,11; 131:8;177:15 2017 (5) 37:16;41:13;60:4,9; 177: 2018 (103) 9:13;11:13;15:5,25; 16:16;17:5;27:4; 29:13;40:10,15,24; 41:2,8,12,18,19;42:2, 3,7,8,11,25;46:19; 55:5;66:17;67:6,16; 69:7,17;70:1;71:9,23; 74:21;76:4,8;81:24; 83:3;84:3,5;85:4,8; 86:1,5;87:10;90:4; 94:5;103:25;104:8; 105:7,23;106:12; 112:17;113:9;122:5; 126:18;127:14;131:8; 140:5,6,13,17,18; 141:3,15,23;143:14, 25;149:1,25;150:22; 155:14,21;157:20,21, 22;160:10,20;161:17; 162:8,11,16,19;163:2, 4,13;164:12;165:6,8; 166:1,6;167:2,7; 168:8,22;169:2,9,19, 23;170:5,14,22; 171:2;177: 2019 (2) 9:9;115:11 2019's (1) 115:15 202 (1) 2:19 2020 (8) 1:10;103:4,8; 107:22;174:1;175:14; 177:1,21 21 (1) 13:20 212 (1) 2:7 22 (4) 22:19;66:5;104:18; 105:14 24 (2) 23:3;38:23 241 (1) 20:20 25 (2) 13:20;157:8 26 (3) 1:10;174:1;177:1 26.5 (1) 169:9 26.57 (1) 169:15 | 27 (1) 76:1 28 (4) 100:15;142:21; 144:25;145:2 28.23 (1) 145:20 28.85 (1) 145:21 29 (1) 144:24 3 3 (28) 14:20;23:21;43:11, 12;49:9;117:6,7,10, 16;122:19;130:24,25; 131:4,19;132:4,24; 133:11;134:3,8,25; 135:2,25;136:11; 154:6,9;155:12,16; 177:10 3,949,905 (1) 70:4 3.9 (3) 72:5,14;74:21 30 (1) 142:20 30.1 (2) 90:1,7 301,291 (1) 136:15 30318 (1) 3:7 31 (2) 107:13;108:2 31.33 (1) 170:21 32 (1) 86:14 33 (1) 90:1 35 (1) 158:15 35.8 (1) 46:12 36 (3) 100:24;101:2; 104:15 37 (1) 101:4 37.61 (1) 170:25 38 (1) 103:20 4 4 (16) 14:25;60:6,8;121:2; 123:8,14,17,21;137:8, 9,10;138:18,20;139:5, | 19;177: 4,102,016 (1) 74:19 4,165,405 (1) 70:13 4.1 (2) 72:13;75:3 4.7.1 (1) 93:24 40 (1) 64:18 42 (1) 111:7 43 (1) 177:10 45 (3) 65:17;121:15,18 45-degree (9) 121:22;122:3; 123:5,7;156:19; 157:24;158:8;159:3,6 46 (4) 117:19;154:6,9; 155:17 48 (1) 121:3 49 (2) 66:7;105:13 5 5 (18) 69:2,6,16;70:1; 138:14,17,19;139:5, 19;148:16,18,19; 151:13;154:13,17; 155:19;177:., 5,245,862 (1) 140:4 5.4 (2) 48:24;55:4 50 (2) 123:23;137:14 50.03 (1) 70:17 500 (2) 3:6;167:21 51 (1) 104:17 55.1 (1) 46:11 56 (1) 99:18 564,248 (1) 136:14 57 (2) 142:15,16 58 (1) 140:3 59 (5) 99:19;142:5; 144:16;145:15,20 59.3 (2) | 146:7;161:3 59.37 (4) 144:15;146:7; 160:19,19 59.7 (3) 114:20,24;115:22 6 6 (12) 64:25;65:14;69:2,8, 19;70:11;138:16,22; 139:5,19;153:10; 177:15 6,053,385 (1) 65:21 6,053,891 (1) 65:5 60 (8) 49:22;50:1,13; 138:24;142:16; 144:21;145:19;177: 60.08 (1) 141:10 60.26 (1) 146:9 60.8 (1) 141:16 61 (1) 159:15 61.44 (1) 70:3 62 (2) 145:24;146:19 63 (5) 148:17;150:7,20; 154:13;155:19 640-2850 (1) 2:19 65 (1) 75:25 67 (2) 156:11;162:9 678 (1) 3:8 68 (1) 48:24 69 (6) 124:13;161:10,11; 177:.,15 7 7 (19) 69:2,9,22;70:16; 91:13,15;139:25; 140:1,3,22;141:11; 142:8,10;156:10,12; 159:17,21,22;177: 701-9381 (1) 3:8 75 (1) 171:14 | 76.53 (1) 70:12 77 (1) 20:2 8 8 (14) 47:2,9;98:6,7,12; 135:20;140:19,20; 141:11,21;142:8,9; 150:19;177:18 8,113 (1) 106:8 80 (5) 86:14;87:1,10,16; 88:9 84 (1) 89:25 85 (1) 114:9 85.0 (1) 115:22 86 (1) 60:11 87 (1) 94:1 87.44 (1) 168:5 88 (1) 93:22 89 (5) 92:16;93:11;95:1; 145:24;146:11 891-1600 (1) 2:7 9 9 (16) 102:22,23;114:17; 115:12;144:6;145:7; 146:25;147:6,8; 148:4;159:14,21,22, 24;160:5;177: 9.1 (3) 46:13,21,24 9:00 (1) 21:3 9:05 (1) 21:4 9:14 (1) 1: 90 (2) 92:24;100:18 901,000 (1) 108:17 91 (3) 92:24;93:12,22 919 (2) 1:17;2:5 92 (2) 19:21;96:13 |
|--|---|---|---|---|

94 (1)
100:23
94.9 (2)
114:8;115:22
940,000 (1)
108:19
95 (5)
124:22;125:6,9,11,
23
96 (1)
101:3
98 (1)
177:18
99 (5)
103:19;104:12;
105:19,24;129:15
99.13 (2)
65:20;66:2

DEFENDANTS' EX. 1

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

FAIR FIGHT ACTION, et al.,)

Plaintiffs,)

v.)

Civ. Action No. 1:18-cv-05391-SCJ

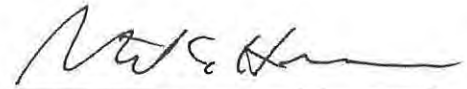
BRAD RAFFENSPERGER,)
in his official capacity as)
Secretary of State of the)
State of Georgia, et al.,)

Defendants.)

EXPERT REPORT OF MICHAEL C. HERRON

William Clinton Story Remsen 1943 Professor,
Department of Government
Dartmouth College
6108 Silsby Hall
Hanover, NH 03755-3547

February 18, 2020



Michael C. Herron, Ph.D.



Contents

| | | |
|-------|--|----|
| 1 | Summary of conclusions | 5 |
| 2 | Overview of report | 7 |
| 3 | Qualifications | 13 |
| 4 | Data used in this report | 15 |
| 4.1 | Georgia voterfiles | 15 |
| 4.1.1 | Overview of Georgia voterfiles | 16 |
| 4.1.2 | The 2014 Georgia voterfile | 18 |
| 4.1.3 | The 2016 Georgia voterfile | 22 |
| 4.1.4 | The 2018 Georgia voterfile | 22 |
| 4.2 | Voter history files | 24 |
| 4.3 | Georgia polling places used in 2018 | 25 |
| 4.4 | Census data | 26 |
| 4.5 | Identifying polling places that closed in Georgia between 2014 and 2018 | 27 |
| 4.6 | Identifying Georgia registered voters who did not move between 2014 and 2018 | 31 |
| 4.7 | Data limitations and underestimates of the extent to which black registered voters were affected by 2014-2018 polling place changes in Georgia | 33 |
| 4.7.1 | Lack of a 2012 Georgia voterfile | 34 |

| | | |
|-------|--|----|
| 4.7.2 | Lack of individual race details in the 2014 voterfile . . . | 36 |
| 5 | Assessing the racial neutrality of polling place changes in Georgia, 2014 to 2018 | 40 |
| 5.1 | Identifying polling place closures in Georgia between 2014 to 2018 | 42 |
| 5.2 | Polling place closures and race | 49 |
| 5.2.1 | Assessing the racial neutrality of polling place closures using racially homogeneous block groups | 49 |
| 5.2.2 | Assessing the racial neutrality of polling place closures using race data from the 2016 and 2018 voterfiles . . . | 51 |
| 5.2.3 | Black majority precincts and polling place changes . . | 53 |
| 5.3 | Race and new polling place assignments among non-movers in Georgia in the period 2014 to 2018 | 56 |
| 5.3.1 | Overview of non-movers | 57 |
| 5.3.2 | The distribution of race among non-moving Georgia registered voters | 59 |
| 5.3.3 | Variance across Georgia counties in the rates at which non-movers received new polling places in 2018 compared to 2014 | 62 |
| 5.3.4 | Racial variance across counties in the rates at which non-movers received new polling places in 2018 compared to 2014 | 65 |

5.4 New polling places and voter turnout in the 2018 General Election 68

5.4.1 Statewide turnout in the 2018 General Election 69

5.4.2 Turnout in the 2018 General Election broken down by race 69

5.4.3 Election day turnout in the 2018 General Election 72

6 Conclusion 74

7 Appendix: *curriculum vitae* of Michael C. Herron 76

1 Summary of conclusions

1 Registered voters in Georgia who cast their ballots on election day are required to use the polling places assigned to them by elections officials. Between the General Elections of 2014 and 2018, a total of 459 of 2,516 polling places used in Georgia closed, and this affected over a million registered voters in the state. In particular, voters assigned to closed polling places were by necessity assigned new polling places in time for the 2018 General Election. In addition, some registered voters in Georgia were assigned new polling places for the 2018 General Election even though the polling places they used in 2014 had not closed.

2 Prior to *Shelby County v. Holder* (2013), per the Voting Rights Act significant changes in election administration practices in Georgia—like large-scale polling place adjustments—had to be cleared by the United States federal government before they could be implemented. The *Shelby County* decision vitiated this requirement.

3 The adjustments made to Georgia's polling places between 2014 and 2018 were not racially neutral. In particular, black registered voters were disproportionately more likely than white registered voters to have their polling places changed between 2014 and 2018. In addition, polling places with a black majority of registered voters in 2014 were more likely to be closed than polling places without a black majority.

4 Existing literature in political science shows that being assigned to a new polling place can have negative effects on a state's registered voters and in particular can impact subsequent election turnout. I find evidence that voter turnout in Georgia is consistent with this general result.

5 In particular, there are two ways to vote in Georgia: absentee (either via mail or in-person) and on election day. Among Georgia registrants who did not move between 2014 and 2018, those who received new polling places between 2014 and 2018 were less likely to vote on election day in 2018. These individuals were also less likely to vote overall in the 2018 General Election. These findings hold as well when restricting attention to politically engaged registered voters in Georgia, namely, those who voted in the 2014 General Election.

6 These results on turnout in the 2018 General Election show that the precinct-related administrative decisions made by elections officials in Georgia in the time period 2014 to 2018 portended downstream consequences for election turnout. Insofar as precinct adjustments in Georgia between 2014 and 2018 were not racially neutral, these downstream consequences were not racially neutral, either.

2 Overview of report

7 In the matter of *Fair Fight Action, Inc., et al. v. Brad Raffensberger, et al.*, I have been engaged by plaintiffs’ counsel to assess the extent to which polling place adjustments were made in Georgia between the 2014 and 2018 General Elections. I was also asked to analyze whether the adjustments in this time period, to the extent that they existed, were racially neutral (meaning that they affected all racial groups in Georgia approximately equally) or were not racially neutral (meaning that they affected some racial groups more than others). With respect to a potential interaction between polling place adjustments and race, I was asked in particular to focus on white and black registered voters in Georgia. These are the two largest racial groups in the state and together constitute over 90 percent of Georgia’s population.¹

8 In this report, I use the term “polling place” to mean a physical address where individuals can cast ballots on election day. A polling place is distinct from a precinct, which per O.C.G.A. § 21-2-2 “means a geographical area...from which all electors vote at one polling place.”² I can thus write of a polling place that has closed—meaning, election day voting no longer takes place at said place. While a precinct in the sense of O.C.G.A. § 21-2-2 can be adjusted, as a geographical area it cannot be said to have closed.

¹*QuickFacts Georgia*, United States Census Bureau (as of July 1, 2019), available at <https://www.census.gov/quickfacts/GA> (last accessed February 14, 2020).

²For the text of O.C.G.A. § 21-2-2, see <https://law.justia.com/codes/georgia/2010/title-21/chapter-2/article-1/21-2-2> (last accessed February 14, 2020).

9 In public discourse, “polling places” and “precincts” are sometimes used interchangeably.³ However, since this report’s primary focus is on the literal places in Georgia where Georgia voters cast ballots, I distinguish between these terms as described in the paragraph above.

10 The focus of this report on election day polling places in Georgia reflects the fact that election day voting is a major component of voter turnout in contemporary Georgia statewide elections. In the 2014 General Election, total turnout in Georgia was 2,597,088 voters of whom 1,641,657 (approximately 63 percent) cast their ballots on election day.⁴ The other Georgia voters in this election cast absentee ballots, either by mail or in-person, prior to November 4, 2014.⁵ In the 2016 General Election, total voter turnout in

³Mark Niese and Nick Thieme, *Precinct closures harm voter turnout in Georgia, AJC analysis finds*, The Atlanta Journal-Constitution (December 13, 2019), available at <https://www.ajc.com/news/state--regional-govt--politics/precinct-closures-harm-voter-turnout-georgia-ajc-analysis-finds/11sVcLyQCHuQRC8qtZ6lYP> (last accessed February 14, 2020).

⁴This turnout number is based on the number of rows in the 2014 General Election turnout file, available from the Georgia Secretary of State at <https://elections.sos.ga.gov/Elections/voterhistory.do> (last accessed November 23, 2019). The turnout number differs slightly from the election turnout figure of 2,596,947 that appears in the Secretary of State’s results summary of the 2014 General Election. See <https://results.enr.clarityelections.com/GA/54042/149045/en/summary.html> (last accessed February 6, 2020) for this summary. The reason that I use the Georgia Secretary of State’s turnout file as the source for total turnout in Georgia in the 2014 General Election is to maintain consistency with data used in this report. In particular, the 2014 General Election turnout file can be linked to the voter-level datasets that, as explained later, I use to draw conclusions about the extent to which precinct adjustments in Georgia in the period 2014 to 2018 were racially neutral.

⁵Georgia voters casting in-person votes prior to an election are said in the state to vote in-person absentee as opposed to mail absentee. In other states, in-person absentee voters would be classified as “early” voters. Methods of voting are described by the Georgia Secretary of State at https://sos.ga.gov/index.php/elections/ways_to_vote_in_georgia (last accessed December 6, 2019).

Georgia was 4,166,929 of whom 1,736,828 voters (approximately 41.7 percent) cast ballots on election day.⁶ In 2018, approximately 46.4 percent of Georgia voters cast their ballots on election day. Thus, while in-person, election day voting is not presently used by all Georgia voters, in the three most recent statewide elections in Georgia it was used by a large percentage of them.

11 When voting on election day in Georgia, eligible voters must cast their ballots at polling places assigned by election officials. A Georgia voter who wishes to cast a ballot on election day does not have a choice over which polling place he or she is permitted to use.

12 In the time period between elections, jurisdictions in the United States, like states or counties, may consider changing the polling places to which their registered voters are assigned. In Georgia, changing polling places was historically regulated by Sections 4 and 5 of the federal Voting Rights Act. This legislation mandated that so-called “covered jurisdictions”—of which Georgia was one—had to clear proposed election administration changes with federal authorities prior to implementing said changes.⁷

⁶Parallel to the fn. 4, the 2016 overall turnout number differs slightly from the 2016 turnout figure (4,165,405) reported by the Georgia Secretary of State on its election website. See <https://results.enr.clarityelections.com/GA/63991/184321/en/summary.html> (last accessed February 6, 2020).

⁷*About Section 5 of The Voting Rights Act*, The United States Department of Justice, available at <https://www.justice.gov/crt/about-section-5-voting-rights-act> (last accessed February 10, 2020).

13 On June 25, 2013, the United States Supreme Court in *Shelby County v. Holder* ruled that Section 4 of the Voting Rights Act is unconstitutional. This ended the requirement that election jurisdictions in Georgia receive permission prior to implementing changes to the way that they administer elections.⁸

14 Post-*Shelby County*, a jurisdiction in Georgia can, for example, close some of its existing polling places and assign the registered voters who would have voted at these places to new places that may or may not have previously existed. Or, a jurisdiction in Georgia can change its polling places without closing any of them by, for example, shifting registered voters from a set of existing polling places to a different set of places. A jurisdiction that carries out the sort of administrative adjustments described above can be said to have engaged in an exercise called “reprecincting.”

15 I use the term “reprecincting” to refer to changes either in precinct boundaries or polling places. Notwithstanding the distinction between polling places (physical addresses where voters cast ballots) and precincts (geographical areas from which voters cast ballots in polling places), this is how the term is used in the academic literature on election administration.

16 As I will demonstrate in this report, numerous counties in Georgia engaged in reprecincting between the 2014 General Election and the 2018

⁸For details pertaining to *Shelby County v. Holder*, see <https://www.oyez.org/cases/2012/12-96> (last accessed February 10, 2020).

General Election. Not all 159 counties in the state engaged in reprecincting exercises between these two statewide elections, however, and there was variance across the counties that did engage in reprecincting in the extent to which they adjusted their polling places.

17 Scholars have shown that registered voters whose polling places change—that is, registrants who have been “reprecincted”—have lower likelihoods of voting in future elections (Brady and McNulty, 2011; Amos, Smith and Ste. Claire, 2017). This finding implies that reprecincting procedures are not necessarily politically neutral. Such a lack of neutrality would be induced if, for example, in a jurisdiction of interest the likelihood of being reprecincted in a given time period varied by voter type, i.e., by racial or partisan group.

18 With this discussion of polling places and reprecincting as background, I accomplish the followings tasks in this report.

1. I characterize the extent to which polling places in Georgia closed between the 2014 and 2018 General Elections in the state. This entire time period is post-*Shelby County*.
2. I assess the extent to which the 2014-2018 polling place closures in Georgia were racially neutral, and I find that they were not. This conclusion is based on three approaches to studying polling place closures, all of which show that black registered voters in Georgia were dispro-

portionately affected by closed polling places in the state compared to white registered voters.

3. I analyze registered voters in Georgia whose addresses did not change between 2014 and 2018. I focus on these “non-movers” because the only reason that these individuals would have been assigned to new polling places between 2014 and 2018 is if they were reprecincted in some fashion. In contrast, movers in Georgia, by virtue of their moving, may be assigned to new polling places if they move sufficiently far from their original residences. I characterize the extent to which non-movers in Georgia were affected by the reprecincting across Georgia that took place between 2014 and 2018 and find that non-moving black registered voters in Georgia were disproportionately affected by the reprecincting in the state compared to white registered voters.
4. I show that non-moving, reprecincted registrants in Georgia had lower voter turnout rates in the 2018 General Election compared to non-moving, non-reprecincted registered voters. In other words, receiving a new polling place in the period 2014-2018 is associated with lower turnout in November 2018. This finding holds even restricting attention to politically active registered voters in Georgia.

3 Qualifications

19 This section of the report describes my background and explains why I am qualified to render an opinion on the reprecincting in Georgia that took place between 2014 and 2018.

20 I am the William Clinton Story Remsen 1943 Professor of Government and Chair of the Program in Quantitative Social Science at Dartmouth College in Hanover, New Hampshire. I have taught at Dartmouth since 2003 and previously was on the faculty of Northwestern University. I have served as a visiting professor at Harvard University (July 2008–January 2009), the University of Rochester (September 2006–December 2006), and the Hertie School of Governance in Berlin (August 2011–August 2012). I have also served as a visiting scholar at the Hertie School of Governance (August 2016–July 2017).

21 In January 1998, I received a doctorate in the field of Political Economy from the Graduate School of Business at Stanford University. I also have a master's degree in statistics from Stanford University (June 1995), a master's degree in political science from the University of Dayton (August 1992), and a bachelor's degree in mathematics and economics from Carnegie-Mellon University (May 1989).

22 I have published many peer-reviewed, scholarly articles on election administration. Among other subjects, I have written on the effects of ballot formats, patterns in invalid votes, the availability of early voting, and polling place congestion. My articles rely on statistical analyses, and my ongoing research agenda focuses heavily on issues in election administration.

23 I have published in many political science journals including the field's top general journals (*American Political Science Review*, *American Journal of Political Science*, and *Journal of Politics*). I have published in specialty journals as well (*Election Law Journal*, *American Politics Research*, and *Legislative Studies Quarterly*). All of these journals are peer-reviewed. My *curriculum vitae*, which lists all of my published papers, including those authored within the last ten years, is attached to this report as an appendix.

24 I was a testifying expert for plaintiffs in *League of Women Voters of New Hampshire et al. v. William M. Gardner et al.* (226-2017-CV-433) and in *Veasey et al. v. Abbott et al.* (265 F. Supp. 3d 684 (S.D. Tex. 2017)) and a testifying expert for defendants in *Jennings v. Elections Canvassing Commission of Florida* (2006 WL 4404531 (Fla.Cir.Ct.)). These cases relate to aspects of election law and election administration.

25 The methodologies used throughout this report are typical of, and in some cases identical to, techniques that I have used in the past and continue to use regularly as part of my academic research. The statistical calculations

that I made as part of the report were generated using the R statistical computing environment, Version 3.6.1 (R Core Team, 2019), and Stata Version 14 (StataCorp, 2015).

26 I am being paid at a rate of \$400/hour for work on this report.

4 Data used in this report

27 My report's empirical results on the reprecincting carried out in Georgia between 2014 and 2018 draw on a variety of different sources of data. I describe these sources in this section of the report.

28 After characterizing the report's data sources, I then describe some data manipulations that I carried out on them prior to drawing conclusions.

4.1 Georgia voterfiles

29 To analyze the extent to which Georgia's polling places were changed between the 2014 and 2018 General Elections and to assess whether changes to these places were racially neutral, I must identify the registered voters in Georgia whose polling places were constant in this time period and those whose polling places changed. Key to these tasks are lists of registered voters in Georgia that date to 2014, 2016, and 2018.⁹

⁹The Georgia Secretary of State distinguishes between active and inactive registered voters, and it is my understanding that the voterfiles that I use in this report include both types. This conclusion is based on the following logic. As of 2018

30 Registered voters in Georgia are enumerated in what the Georgia Secretary of State calls a “voter registration list.” A generic term for such a list is a statewide *voterfile*, and I use that term throughout this report. A voterfile consists of a list of registered voters in a state with accompanying demographic details. According to the Georgia Secretary of State, the Georgia voterfile contains demographic fields that, among other things, track registered voter race, gender, and date of birth.¹⁰

31 In some states, like Georgia and its neighboring state of Florida, voterfiles are public documents. In other states, like New Hampshire, voterfiles are not public.

4.1.1 Overview of Georgia voterfiles

32 The three Georgia voterfiles that I use in this report have effective dates of October 24, 2014, October 26, 2016, and October 15, 2018. This means, for example, that the foremost voterfile lists registered voters in Georgia as of October 24, 2014, and the lattermost, registered voters as of October

General Election, the Georgia Secretary of State reports that there were 6,428,581 active registered voters in the state along with 507,235 inactive voters. For these two figures, see “HISTORICAL VOTER REGISTRATION STATISTICS,” available at <https://sos.ga.gov/admin/files/Voter%20Registration%20Statistics%20Historical%20-%20Updated%2011-26-18.pdf> (last accessed February 15, 2020). The sum of active and inactive registered voters in Georgia is, according to the Georgia Secretary of State, 6,935,816. My 2018 voterfile contains information on 6,928,150 registered voters in Georgia, and this latter number is quite close to 6,935,816.

¹⁰For details on the demographic variables that are included in Georgia voterfiles, see *ORDER VOTER REGISTRATION LISTS AND FILES*, Georgia Secretary of State, available at https://sos.ga.gov/index.php/elections/order_voter_registration_lists_and_files (last accessed February 7, 2020).

15, 2018. Hereinafter I refer to the three aforementioned voterfiles as the *2014 voterfile*, the *2016 voterfile*, and the *2018 voterfile*, respectively.

33 Georgia voterfiles include official voter registration numbers, which to the best of my knowledge are unique to individual registrants. Each Georgia voter registration number is eight digits long, and these numbers can be used to track individual registered voters across voterfiles.

34 I discuss my 2014, 2016, and 2018 Georgia voterfiles below, and in the processes of this explain that what I call the 2014 voterfile is actually a subset of the complete 2014 Georgia voterfile. For the moment, though, it suffices to note that I verified that my 2014 voterfile does not contain duplicate voter registration numbers. I carried out this verification as an integrity check on the 2014 voterfile. For the same purpose I verified the uniqueness of voter registration numbers in the 2016 and 2018 voterfiles as well.

35 Any individual who registered to vote in Georgia between the effective dates of the 2014 and 2018 voterfiles used in this report will appear in the latter but not the former. There are 5,245,872 individuals in the 2014 voterfile who also appear in the 2018 voterfile. Thus, approximately 86.7 percent of the 6,053,385 individual records in the 2014 voterfile can be linked to records in the 2018 voterfile.

36 Some of my conclusions about polling place changes in Georgia between 2014 and 2018 are based on analyses of registered voters who appear in both the 2014 and 2018 Georgia voterfiles. That said, the aforementioned set of 5,245,872 registered voters who appear in these two files is an important one.

4.1.2 The 2014 Georgia voterfile

37 I now present some details on the 2014 Georgia voterfile.

38 The 2014 voterfile that I use in this report is one component of a larger SQLite database, produced by the State in discovery, that itself contains 12 separate tables.¹¹ SQLite is a standard electronic format for a database, and I was able to access the database provided to me without difficulty. Of the 12 tables in the database, I use two in this report.

39 The SQLite database table titled “Voters” (6,053,391 rows) lists registered voters in Georgia in 2014. This table, one of 12 in the database that I described above, is what I call the 2014 voterfile.

40 While the 2014 voterfile contains 6,053,391 registered voters, six of these individuals have no associated county. In particular, the 2014 voterfile

¹¹The SQLite database is contained in a file named “STATE-DEFENDANTS-00089546.DB3.” I was provided this file by Counsel. Counsel provided me as well with a file named, “STATE-DEFENDANTS-00089546.Metadata.xlsx.” This file is an Excel spreadsheet, and Column S in the spreadsheet states that the last modification date of the SQList database was October 24, 2014. I use this date as the effective date for the voterfile that is part of the SQList database.

has 28 fields in it, one of which is named “countyId,” which I understand to be an elision of “county identifier.” For the six aforementioned registered voters, this field is zero and thus erroneous.

41 Outside of the six problematic registered voters, all other registered voters in the 2014 voterfile have “countyId” values of between one and 159, reflecting the fact that Georgia consists of 159 counties. I drop the six individuals who have no county identifier from the report’s analysis and thus say from this point onward that the 2014 voterfile contains 6,053,385 total registered voters. None of the conclusions in this report depend qualitatively on the six dropped registered voters whose county codes in the 2014 voterfile are invalid.

42 Beyond specifying county, the “Voters” table that makes up my 2014 Georgia voterfile contains *inter alia* registered voter names, addresses, and dates of birth. These data fields are found in Georgia voterfiles. However, the table does *not* include a variable for registered voter race, and this explains why I wrote, above, that the 2014 voterfile used in this report is a subset of the actual 2014 Georgia voterfile. In an upcoming section of this report, I return to the implications of the fact that registered voter race is missing from my 2014 voterfile. To the best of my knowledge, the State has not produced via discovery a complete 2014 Georgia voterfile.

43 Beyond the “Voters” table in the 2014 SQLite database, the second table from this database that I use in this report is titled “Consolidations.” This table contains precinct and polling place information. Of the table’s rows, 2,531 are associated with polling places that have valid county identification numbers. And, 2,516 of the rows in “Consolidations” have unique addresses. To the best of my knowledge, this implies that some Georgia precincts in 2014 shared polling places.¹²

44 The “Consolidations” table in the SQLList database contains a data field called “consolidationID,” which I understand to be an elision of “consolidation identifier.” This field also appears in the “Voters” table. Using the presence of “consolidationID” in both the “Voters” table and the “Consolidations” table, I merge polling place details from the latter table into the former.¹³ By polling place details, I mean the name of each associated precinct and its physical street address in Georgia.¹⁴ Based on this merge, I can identify the polling place for every registered Georgia voter who appears

¹²For example, there are two precincts in “Consolidations” whose polling place is 103 Broad Street N, Abbeville GA 31001. To the best of my understanding, these precincts are named, “Abbeville North 2” and “Abbeville North 5.” While these two precincts use the same physical voting place, they have different identifying numbers in the “Consolidations” table, 156005 and 156011, respectively. The “Consolidations” table lists two different polling names for these places, “COURTHOUSE 2A” and “COURTHOUSE 5A,” respectively. Even if these denote separate rooms or other spaces in 103 Broad Street, I treat them as have identical places insofar as they have the same street address.

¹³The “consolidationID” field in the “Consolidations” table contains 3,094 unique entries, which is consistent with the 3,094 rows in the table. I verified that every consolidationID in the “Voters” table appears in the “Consolidations” table.

¹⁴Precinct names and polling places are contained in the following three fields in the Consolidations table: “pollName,” “pollAddress,” and “pollCityStateZip.”

in the 2014 voterfile.

45 I hired a research assistant to geolocate the 6,053,385 registered voters in Georgia as of the 2014 General Election. By this I mean that I requested that my assistant determine the latitude and longitude of each voter's residential address that appears in the 2014 voterfile. This geoplace exercise was successful for approximately 99.13 percent of Georgia's 6,053,385 registered voters in 2014.¹⁵

46 Based on voters' latitudes and longitudes, I can infer which census block group almost every 2014 registered voter in Georgia was located in. By "almost every," I mean approximately 99.13 percent. Below I discuss census block groups and how I use them in this report. For the moment, though, it is sufficient to note that a census block group is a geographical unit that is used by the United States Census Bureau. The intention of the geoplace exercise I mentioned above is to use residential address data in the 2014 voterfile to determine the census block group in which each registered voter in Georgia lived as of the effective date of the 2014 voterfile.

¹⁵My research assistant used ESRI ArcMap to geolocate registered voter addresses in Georgia. An address can be difficult to geolocate in the presence of street or address changes or if there is disagreement between the Census Bureau, the United States Postal Service, and surveyors as to where a particular address is truly located. For example, the town of Pearson, Georgia, contains a street named "Cody Bazemore Lane." The United States Postal Service recognizes this street name. However, ESRI ArcMap and Google Maps do not, the latter thinking that the street name is actually "Robert D. Bazemore Lane."

4.1.3 The 2016 Georgia voterfile

47 I now turn to the 2016 Georgia voterfile that I use in this report.

48 The 2016 voterfile used here is contained in a text file that, to the best of my knowledge, was created by the Georgia Secretary of State. This file is pipe-delimited, meaning that its fields are separated by the pipe symbol (|). This is a standard format for a text-based data file. The 2016 Georgia voterfile lists 6,653,011 registered voters.

49 For reasons that will be clear shortly, I use the 2016 voterfile only for the purpose of identifying the races of the registered voters who are listed in it. Registered voter race codes consist of short (one or two letter) abbreviations that specify the self-designated races of all of the registered voters in the 2016 voterfile. This voterfile has 351 erroneous race codes.

4.1.4 The 2018 Georgia voterfile

50 I now turn to the 2018 Georgia voterfile that I use in this report.

51 The 2018 voterfile used here, like the aforementioned 2016 voterfile, is contained in a text file that, to the best of my knowledge, was created by the Georgia Secretary of State. This file is pipe-delimited like its 2016 counterpart and lists 6,928,150 registered voters. Of those, none has an erroneous county code, and 18 have erroneous race codes.

52 There are 63 fields in the 2018 voterfile, one of which is voter race.¹⁶ As noted above, there are 18 registered voters in the 2018 voterfile whose race fields contain erroneous codes.¹⁷ When in this report I discuss the racial breakdown of Georgia registered voters in 2018, I disregard these 18 individuals. This small set of registered voters is minuscule compared to the 6,928,150 registered voters in the 2018 voterfile.

Table 1: Distribution of race among registered voters in the 2018 Georgia voterfile

| Race | Count | Percent |
|-------------------------|-----------|---------|
| White | 3,731,324 | 53.86 |
| Black | 2,068,437 | 29.86 |
| Unknown | 680,117 | 9.82 |
| Hispanic | 200,698 | 2.90 |
| Asian/Pacific Islander | 147,260 | 2.13 |
| Other | 91,299 | 1.32 |
| American Indian/Alaskan | 8,997 | 0.13 |
| Total | 6,928,132 | 100.00 |

53 Table 1 describes the distribution of registered voter race in the 2018 Georgia voterfile. The rows are sorted by size of racial group, and it is clear that white registered voters make up the majority (approximately 54

¹⁶There are actually two fields in the 2018 voterfile that describe registered voter race, but these fields are redundant. One such field, named “race,” consists of two-letter race group abbreviations, i.e., “AP” and “WH.” The second field, named “race_desc,” consists of expansions of these abbreviations, i.e., “American Indian or Alaskan Native” and “White not of Hispanic Origin,” respectively.

¹⁷In particular, the “race” field for these 18 registered voters is “F” (11 cases) and “M” (seven cases). I suspect, but do not know, that these represents gender codes (“F” for female and “M” for male) that are erroneously placed in race fields. In the 18 cases of interest here, the field “race_desc” is also erroneous insofar as this field for the 18 cases contains a date as opposed to a race group description.

percent) of registered voters in Georgia. The next largest group is black registered voters (approximately 30 percent), following by registered voters with unknown races (approximately 10 percent). Beyond black and white registered voters, no other race group in Georgia makes up more than three percent of the total Georgia registered voter pool.¹⁸

4.2 Voter history files

54 The Georgia Secretary of State maintains lists of registered voters who participated in elections in Georgia. These lists, which are publicly available, are contained in what are known as *voter history files*.¹⁹

55 A voter history file for a given election consists of a set of voter registration numbers, each of which is associated with a registered Georgia voter who cast a ballot in said election. Voter history files also indicate how—on election day or absentee—each voter cast his or her ballot.

56 For the purposes of this report, I downloaded voter history files for the 2014 and 2018 General Elections.²⁰ Using the fact that Georgia voter

¹⁸Table 1 does not report confidence intervals for the percentages in it (the rightmost column of the table). This is because the table contains results from the complete 2018 Georgia voterfile. The 2018 voterfile does not consist of a sample of registered voters in Georgia as of its effective date, October 15, 2018; the file contains literally the universe of these individuals.

¹⁹*Elections Division Voter History Files*, Georgia Secretary of State, available at <https://elections.sos.ga.gov/Elections/voterhistory.do> (last accessed February 16, 2020).

²⁰The source for the history files is noted in fn. 4. The names of the 2014 and 2018 files that I downloaded are “31979.TXT” and “34147.TXT,” respectively.

history files and voterfiles are indexed by voter registration numbers, each of which corresponds to a unique registered voter in Georgia, I merged election turnout data from the 2014 and 2018 voter history files into my 2014 and 2018 voterfiles, respectively. From this merge, I can determine which registered voters in the 2014 and 2018 voterfiles voted in the 2014 and 2018 General Elections, respectively, as well as whether each individual voted on election day.

4.3 Georgia polling places used in 2018

57 I have already described how the SQLite database from which I generated my 2014 voterfile also contains information about precincts used in the 2014 General Election. I noted this when discussing two tables (“Voters” and “Consolidations”) that are part of the database.

58 Through discovery in this litigation, the State provided an SQLite database for the 2018 General Election.²¹ The format of the 2018 SQLite database is essentially equivalent to that of the 2014 SQLite database that I discussed above.

59 In particular, the 2018 SQLite database contains 12 tables, among them a table listing registered voters (“Voters”) and a table with polling place information (“Consolidations”). The “Voters” table contains a field called

²¹This database is named, “STATE-DEFENDANTS-00089548.DB3,” and it was provided to me by plaintiffs’ Counsel.

“consolidationID,” and this field can be used to associate each registered voter in “Voters” with his or her polling place in the 2018 General Election.

60 Using voter registration numbers, which appear in my 2018 voterfile and in the 2018 “Voters” table that is part of the 2018 SQLite database provided by the State, I merged each registered voter’s “ConsolidationID” into the 2018 voterfile. Then, using “ConsolidationsID,” I merged polling place details from the “Consolidations” table into the voterfile.

61 There are 10,080 registered voters in my 2018 voterfile who do not appear in the 2018 “Voters” table. For this set of individuals (approximately 0.15 percent of the overall voterfile), I do not have polling place details.

4.4 Census data

62 I have thus far described sources of data on Georgia registered voters and where they voted on election day in the 2014 and 2018 General Elections. In my analysis, below, of these voters, I also draw on data from the American Community Survey (ACS), a product of the United States Census Bureau.²² In particular, I use the 2010-2014 ACS to characterize the citizen voting age population (CVAP) of block groups in Georgia.²³ In my discussion of the

²²On the ACS, see the Census Bureau description at <https://www.census.gov/programs-surveys/acs> (last accessed February 8, 2020).

²³*Citizen Voting Age by Race and Ethnicity 2010-2014*, United States Census Bureau (February 1, 2016), available at <https://www.census.gov/data/datasets/2014/dec/rdo/2014-cvap.html> (last accessed February 8, 2020).

2014 voterfile, I noted that a census block group is a geographical unit used by the census.²⁴ There are 5,533 block groups in Georgia, and together these units partition the state geographically. This means that they are exclusive (do not overlap) and exhaustive (together they cover all of Georgia).

63 Census block groups are the second smallest geographical units for which the census reports results. The reason that this report uses block groups as opposed to blocks, which are smaller, is because the ACS does not include CVAP data at the block level.

4.5 Identifying polling places that closed in Georgia between 2014 and 2018

64 I now describe how I determine which polling places in Georgia closed between the 2014 and 2018 General Elections. I include such a discussion in the data section of this report as it reflects data manipulations. To preview what follows, I identify closed polling places in Georgia by assessing the extent to which the physical addresses of polling places used in the 2014 General Election were also used in the 2018 General Election.

65 If a given registered voter's polling place was closed between the 2014 and 2018 General Elections, this means that said registered voter was assigned to a new polling place as of November 2018.

²⁴For the hierarchy of census geographical units, see <https://www2.census.gov/geo/pdfs/reference/geodiagram.pdf> (last accessed February 8, 2020).

66 It is important to distinguish a precinct (a geographical unit) from its associated polling place, and this because multiple precincts can in principle use a single polling place. Earlier I noted that to the best of my understanding, in the 2014 General Election, there were 2,531 precincts in Georgia but only 2,516 polling places (note that 2,516 is 15 fewer than 2,531). This appears to be indicative of some precincts sharing polling places. I noted above that in the 2018 General Election there were also fewer polling places than there were precincts.

67 The two “Consolidations” tables that I have previously discussed include polling place addresses (the variable name in “Consolidations” is “pollAddress”). These addresses are for the most part unique across counties; when they are not unique (e.g., four polling places in 2014 have an address of “000 MAIN STREET,” I add county names to said addresses. Then, I say that a polling place in 2014 closed prior to 2018 if its address was used in 2014 but not in 2018.

68 There are various inconsistencies and minor errors in the 2014 and 2018 polling place address lists that I extracted from the 2014 and 2018 State-provided SQLite databases. For example, the Welcome Community Center, used as a polling place in 2014 and in 2018, is located at 1792 Welcome Rd, Newnan, GA 30263.²⁵ However, in the 2014 “Consolidations” table,

²⁵For this address, see <https://www.facebook.com/pages/Welcome-Community-Center/757936997574418> (last accessed February 17, 2020).

this address appears as *1972* Welcome Rd. I presume that this reflects a transposition of digits in a street address as opposed to a polling place that moved.

69 Another example of inconsistent addresses across 2014 and 2018 lists of polling places is a fire station used in 2014 and 2018 as a polling place in Ludowici, GA 31316. Per the 2018 SQLite database, this fire station is located at 3218 Marcus Nobles Highway. Per the 2014 database, however, the polling place is located at 000 Marcus Nobles Highway.

70 A third example of inconsistent addresses is as follows. In the 2014 General Election, there was a polling place at 101 Barr *Road*, Bowdon, GA 30108. However, in 2018, there was a polling place at 101 Barr *Avenue*, Bowdon, GA 30108. Despite this minor inconsistency in street addresses in 2014 and 2018, I assume that these two polling places are actually located at the same place.

71 I attempted to correct as many errors like the above as I could. In many cases, I was able to identify and resolve polling place address discrepancies by comparing polling places that had identical names in 2014 and 2018 yet different addresses. The name of each polling place can be found in the variable called “pollName” in the 2014 and 2018 “Consolidations” tables.²⁶

²⁶In some cases, I found errors in polling place addresses that were consistent across time. For example, the Rome Civic Center is a polling location in Rome, GA. Its street address is 400 Civic Center *Drive*. In both the 2014 and 2018 “Consolidations” tables,

72 Before comparing polling place addresses to determine which 2014 places closed prior to the 2018 General Election, I removed all punctuation marks from the 2014 and 2018 polling place addresses that I have. The reason that I did this is because, among other things, I did not want inconsistencies in the use of periods to lead me to think that two polling places that in reality are in the same place are actually different. For example, one could reasonably refer to Georgia Highway 125 as “GA HWY 125” or “GA HWY. 125”

73 I note that the polling place data that I have includes some places with missing zip codes in the “Consolidations” field named “pollCityStateZip.” These missing zip codes are not problematic for me because I do not compare polling place zip codes in the 2014 and 2018 General Election.

74 Henceforth, when I state that a given Georgia polling place closed between the 2014 and 2018 General Elections, this means that the address for the polling place used in 2014 does not appear in the list of polling place addresses from 2018.

75 My method of determining which polling places closed in Georgia between 2014 and 2018 does not depend on comparing official polling place or precinct identifiers across these years. In my professional experience as a this address is listed as 400 Civic Center *Dive*. Errors that are consistent across time do not cause problems in comparing polling place addresses in 2014 and those in 2018.

scholar of election administration, county election officials sometimes renumber polling places and precincts without necessarily adjusting them. If, say, a Georgia county were to have renumbered its precincts between 2014 and 2018 but not closed any associated polling places in this time period, my method for identifying closed polling places would not erroneously conclude otherwise.

4.6 Identifying Georgia registered voters who did not move between 2014 and 2018

76 Earlier I noted that Georgia voterfiles contain unique voter registration numbers. I merge my 2014 and 2018 voterfiles using these numbers.

77 Such a merging exercise allows me to assess if any registered voters in Georgia moved within the state between the 2014 and 2018 General Elections. To do this, I create an overall address field for each registered voter in my 2014 and in 2018 voterfiles by concatenating each voter's street address, city, and five digit zip code. After concatenating voter addresses, I remove spaces, ensure that all address characters are lower case, and remove punctuation marks as well.

78 For example, suppose that a registered Georgia voter lived at 206 Washington St. SW, Atlanta, GA 30334. This individual would have an address string of, "206washingtonstswatlanta30334."

79 I then assume that a Georgia registered voter whose concatenated address in 2014 is the same as his or her concatenated address in 2018 did not move between these two years. I similarly assume that registered voters whose address fields differed between 2014 and 2018 moved between these years.

80 My use of concatenated address fields in 2014 and 2018 has two minor limitations. First, my asserting that a difference between a registered voter's overall address in the 2014 and 2018 voterfiles implies that said registered voter moved within Georgia between 2014 and 2018 may not capture the true extent to which such a voter moved in this time frame. This is because I cannot count how many times a voter whose address changed between 2014 and 2018 actually moved in this time period. A registered voter who moved twice between 2014 and 2018 would from my perspective appear the same as a registered voter who moved only once in this period.

81 Second, if a registered voter moved within Georgia between 2014 and 2018 and, prior to 2018, moved back to the exact same address from which he or she started, I would classify this individual as a non-mover even though the individual in fact had moved twice between 2014 and 2018.

82 To the extent that these two issues affect my characterizations of registered Georgia voters who moved within Georgia between 2014 and 2018, they will cause me to understate the extent of registered voter movers in the

state.

83 Lastly, I cannot use my address comparison method for counting moving registered voters to enumerate registrants who moved out of Georgia between 2014 and 2018. This is because the 2018 Georgia voterfile lists only voters who were registered in Georgia itself.

84 Of the 5,245,872 registered voters who appear in both the 2014 and 2018 Georgia voterfiles, I find that 1,625,661 (approximately 30.1 percent) moved between these two years.

4.7 Data limitations and underestimates of the extent to which black registered voters were affected by 2014-2018 polling place changes in Georgia

85 The data sources that this report brings to bear on the relationship between race and polling place changes made in Georgia between 2014 and 2018 are valuable. However, like all data sources used to investigate an aspect of election administration, they have limitations.

86 In this section of the report I discuss two data limitations. First, I comment on the implications of the fact that I do not have access to a 2012 Georgia voterfile. Second, I describe the consequences of the fact that the 2014 voterfile used in the report does not contain a field that describes the

race of each registered voters in Georgia.

4.7.1 Lack of a 2012 Georgia voterfile

87 To the best of my knowledge, the defendants in this litigation have not produced a 2012 Georgia voterfile during discovery.

88 My lack of access to a 2012 voterfile means that the results in this report cannot engage the full extent of polling place changes that have occurred in Georgia since *Shelby County*. This Supreme Court decision was handed down on June 25, 2013, and the effective date of the 2014 voterfile used here is October 24, 2014. Polling place changes promulgated in Georgia between these two dates are thus beyond the scope of this report.

89 Although I do not have direct evidence on the extent of polling place changes in Georgia prior to the effective date of the aforementioned 2014 voterfile, I have indirect evidence that some polling places in the state were indeed changed between the 2012 General Election and October 24, 2014. Here I provide evidence from two Georgia counties, Warren and Forsyth.

90 Per my 2014 voterfile, Warren County had one polling place in the 2014 General Election, located at 48 Warren St., Warrenton GA 30828. This county is approximately 60 percent black and had 5,436 resident as of 2018.²⁷ However, according to a September 2019 report titled, “Democracy

²⁷For these details on Warren County, which come from the 2018 American Community Survey, five year estimates, see <https://data.census.gov/cedsci/table?q=>

Diverted,” issued by the Leadership Conference Education Fund, Warren County closed 83 percent of its polling places between 2012 and 2018 (p. 64). This statement can hold only if Warren County polling places were closed between the 2012 General Election, which the aforementioned report used as a baseline for its analysis of precinct and polling place changes in Georgia, and the 2014 General Election.²⁸

91 Regarding Forsyth County, this is another Georgia county that adjusted its precincts and polling places between 2012 and the 2014 General Election. Forsyth County was approximately four percent black with 236,612 residents as of 2018.²⁹ In the period leading up to the 2014 General Election, the county’s Board of Voter Registration and Elections reduced its number of precincts from 25 to 16.³⁰

warren%20county%20Georgia%20demographics&g=0500000US13301&tid=ACSDP5Y2018.DP05(last accessed February 18, 2020).

²⁸ *Democracy Diverted*, Leadership Conference Education Fund (September 2019), available at <http://civilrightsdocs.info/pdf/reports/Democracy-Diverted.pdf> (last accessed February 12, 2020).

²⁹ For these details on Forsyth County, which come from the 2018 American Community Survey, five year estimates, see <https://data.census.gov/cedsci/table?q=forsyth%20county%20Georgia%20demographics&g=0500000US13117&tid=ACSDP1Y2018.DP05>(last accessed February 18, 2020).

³⁰ *Election Summary Report*, Forsyth County, State of Georgia (November 6, 2012), available at https://www.forsythco.com/Portals/0/Documents/Voter/ElectionResults/2012_11_06/GEMS%20ELECTION%20SUMMARY%20REPORT.pdf(last accessed February 18, 2020) and *Election Summary Report*, Forsyth County, State of Georgia (November 4, 2014), available at https://www.forsythco.com/Portals/0/Documents/Voter/ElectionResults/2014_11_04/11.4.14%20GEMS%20ELECTION%20SUMMARY%20REPORT.pdf(last accessed February 18, 2020. See as well Brande Poulnot, *Forsyth County’s Proposed Voting Precinct Changes Set To Be Decided Nov. 4*, The Patch (October 15, 2013), available at <https://patch.com/georgia/cumming/forsyth-countys-proposed-voting-precinct-changes-set-to-be-decided-nov-4> (last accessed February 16, 2020).

92 Without a 2012 voterfile or another source of information that describes Georgia's polling places as of November 2012, I cannot comment on the extent of precinct changes in Georgia that predate this report. Regardless, to the extent that there were any, it follows that my report's results on the consequences of the polling place changes in Georgia that occurred between 2014 and 2018 underestimate the consequences in Georgia wrought by these types of changes since 2012.

4.7.2 Lack of individual race details in the 2014 voterfile

93 I noted earlier that my 2014 voterfile lacks a field for registered voter race. Insofar as I need to know information about the races of registered voters in Georgia as of the 2014 General Election in order to assess the extent to which polling place changes in Georgia after 2014 were racially neutral, I deal with this lacuna in two distinct ways.

94 *Racially homogeneous census block groups.* Some registered voters in 2014 resided in census block groups that were racially homogeneous, or almost racially homogeneous, with respect to citizen voting age population. If, for example, a 2014 registered voter's address placed her in a census block group whose citizen voting age population was 100 percent black, then it follows that this registered voter is also black. I can infer this even though the 2014 voterfile that I use here lacks a race field. A similar statement applies to a registered voter who lived in 2014 in a racially homogeneous

white census block group; such a registered voter must be white.

95 This logic leads to a homogeneous census block group analysis wherein I focus on registered voters who live in census block groups in Georgia that are at least 95 percent black or at least 95 percent white.

96 The advantage of such an analysis is that it alleviates the problems caused by the fact that the 2014 voterfile lacks a race field. The disadvantage of this approach, however, is that it allows consideration only of places in Georgia that are almost all black or almost all white.

97 *Linking 2014, 2016, and 2018 voter registration records.* Another approach to dealing with the lack of a race field in the 2014 voterfile is to use race information for Georgia registered voters that is contained in the 2016 and 2018 voterfiles. This approach covers more registered voters in 2014 than the homogeneous census block group approach described above, but, as I explain below, it comes at a cost of selecting against black registered voters.

98 When linking the 2014, 2016, and 2018 voterfiles, I transfer race data for registrants in the 2014 file from the 2016 and 2018 voterfiles. This is not problematic for registered voters in Georgia who appear in the 2014 voterfile and then either in the 2016 or 2018 voterfiles (or in both). However, registrants who appear in the 2014 voterfile, but in neither the 2016 nor the 2018 voterfile, cannot be considered in analyses that link the 2014, 2016, and

2018 voterfiles.

99 There are 6,053,385 registered voters in the 2014 voterfile. Using the common registration number field to link the 2014, 2016, and 2018 Georgia voterfiles, I transfer race details from the 2016 file into the 2014 file. This characterizes the races of 5,892,947 registered voters. I find an additional 8,113 registered voters in the 2014 voterfile whose registration numbers do not appear in the 2016 voter file but do appear in the 2018 voterfile. For this group, I transfer race information to 2014 from the 2018 voterfile.

100 When this exercise is complete, I have race information on all 6,053,385 registered voters in the 2014 voterfile except for 152,325 (approximately 2.52 percent).

101 A set of 152,325 registered voters is substantial, and this particular set is most likely not representative with respect to race of all 2014 Georgia registered voters. This is because the set of registered voters in Georgia who were registered in 2014 and then later in either 2016 or 2018 (and thus appear in both the 2014 and in either the 2016 and/or 2018 voterfiles) selects against movers. This means that movers will be disproportionately unrepresented (and non-movers disproportionately represented) among registered voters in Georgia who were registered in both 2014 and then in 2016 and/or 2018. The set of registered voters in Georgia who were registered in both 2014 and then again in 2016 and/or 2018 also selects against registered voters who passed

away between 2014 and 2018.

102 Any set of registered voters that selects against movers is problematic because black individuals on average move more frequently than white individuals.³¹ Therefore, on account of moving propensity, black registered voters as of 2014 are disproportionately less likely compared to white registered voters to be part of a collection of registered voters in Georgia who were registered in 2014 and later in 2016 and/or 2018. Put another way, there are fewer black registered voters in my sample of registered voters who were registered in 2014 and later in 2016 and/or 2018 than there should be.

103 Accordingly, any analysis in this report that uses 2016 and 2018 race data in place of 2014 race data selects against black registered voters.³²

104 As I explain later in this report in the context of specific analyses, this presumably leads to *underestimates* of the relationship between race and polling place changes in Georgia in the period 2014 and 2018. Thus, to the extent that my analyses using 2016 and 2018 race data in 2014 conclude that these changes were not racially neutral, these conclusions are conservative.

³¹ *Americans Moving at Historically Low Rates*, United States Census Bureau (November 16, 2016), available at <https://www.census.gov/newsroom/press-releases/2016/cb16-189.html> (last accessed February 10, 2020).

³² This point is not obviated by the argument that an individual in the 2014 voterfile, but in neither the 2016 nor 2018 voterfiles, was not a registered voter in 2016 and 2018 and thus cannot have had his or her polling place changed between 2014 and 2018. A full assessment of the racial neutrality (or lack thereof) of polling place changes carried out in Georgia between 2014 and 2018 requires the races of all registered voters who, by virtue of being registered to vote in 2014, were vulnerable to such changes.

To the extent that polling place changes in Georgia in the time frame 2014 and 2018 were not racially neutral and in fact affected black registered voters more than white registered voters, the true extent of such non-neutrality is equal to or greater than what I find in this report.

5 Assessing the racial neutrality of polling place changes in Georgia, 2014 to 2018

105 In this section of my report, I describe this report's results on the extent to which polling places changes in Georgia in the time period 2014 to 2018 were racially neutral. This section consists of four parts.

106 First, I provide some basic counts of closed polling places in Georgia, 2014 to 2018, and show that polling place closure rates varied across Georgia.

107 Second, I assess in three ways the extent to which polling place closures in Georgia in the time period 2014 to 2018 were racially neutral. These ways consist of an analysis of racially homogeneous census block groups in Georgia; an analysis which links the 2014, 2016, and 2018 voterfiles; and, an analysis of majority black polling places in Georgia. The conclusions of these three approaches to the question of racial neutral of polling place closures in Georgia in the time period 2014 to 2018 are qualitatively identical: black registered voters in Georgia were disproportionately affected by the

polling place changes in Georgia that occurred between 2014 and 2018.

108 Third, I consider the set of registered voters in Georgia who received new polling places in 2018 compared to 2014. This set of individuals is more numerous than those whose polling places closed in this time frame, and this is because a registered voter in Georgia could have been assigned between 2014 to 2018 to a new polling place even if this voter's polling place in 2014 did not close. This leads me to enumerate the set of registered voters in Georgia who received new polling places sometime between 2014 and 2018, and based on this enumeration I assess whether the process that produced new polling place assignments among registered Georgia voters was racially neutral. I find that it was not, and this conclusion is qualitatively identical to the conclusions, broadly construed, of my assessment of polling closures alone.

109 Fourth, I examine voter turnout rates in the 2018 General Election in Georgia and in particular compare turnout rates among registered Georgians who received a new polling place between 2014 and 2018 and those who did not. I carry out this analysis because it addresses possible downstream effects of the polling place changes made in Georgia between 2014 and 2018. I find evidence that registered voters in Georgia who received new polling places in the period 2014 to 2018 were less likely to vote in 2018, and in particular less likely to vote on election day, compared to registered voters in Georgia who did not receive new polling places in the period 2014 to 2018.

5.1 Identifying polling place closures in Georgia between 2014 to 2018

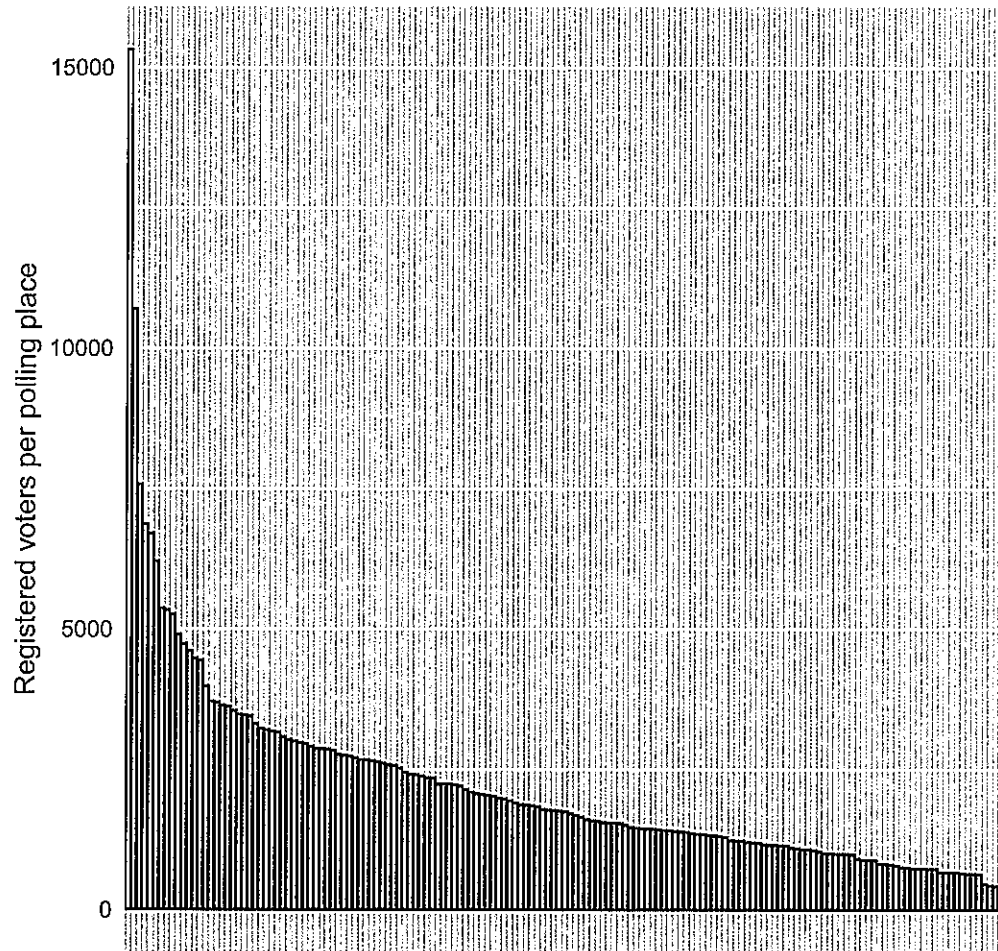
110 There were 2,516 polling places in Georgia in the 2014 General Election and 2,349 such places in the 2018 General Election. The difference between these two numbers is *not* the number of polling place closures between 2014 and 2018, and this is because the total count of Georgia polling places in 2018 includes places that were added between the 2014 and 2018 General Elections.

111 Before detailing polling place closures in Georgia *per se*, I note that the state's 159 counties varied in the extent that they contained polling places in 2014. This is evident in Figure 1, which is a barplot with 159 bars, one per Georgia county. The height of each bar is the ratio of a county's total registered voter pool in 2014 divided by the number of polling places in the county.

112 The tallest bar in Figure 1 is associated with Stephens County. As of 2018, this county had 25,676 total residents and one polling place. The second tallest bar is Rabun County, which as of 2018 had 16,457 residents and one polling place.³³ To the extent that Georgia's polling places are a

³³The demographics for Stephens County and Rabun County are from the 2018 American Community Survey, five year estimates, available at https://data.census.gov/cedsci/table?q=Stephens%20county%20Georgia%20demographics&g=0500000US13257&tid=ACSDP5Y2018.DP05&layer=county&vintage=2018&cid=DP05_0001Eand and https://data.census.gov/cedsci/table?q=Rabun%20County%20Georgia%20demographics&g=0500000US13257&tid=ACSDP5Y2018.DP05&layer=county&vintage=2018&cid=DP05_0001Eand

Figure 1: Registered voters per polling place in 2014, by county



Note: each bar in the figure represents one Georgia county.

form of resources available to the state's registered voters, Figure 1 shows that there was variability across Georgia in the availability of these resources

[20demographics&g=0500000US13241&hidePreview=false&tid=ACSDP5Y2018.DP05&layer=county&cid=DP05_0001E&vintage=2018](#)(last accessed February 16, 2020).

in 2014, that is, at the start of the time period analyzed in this report.

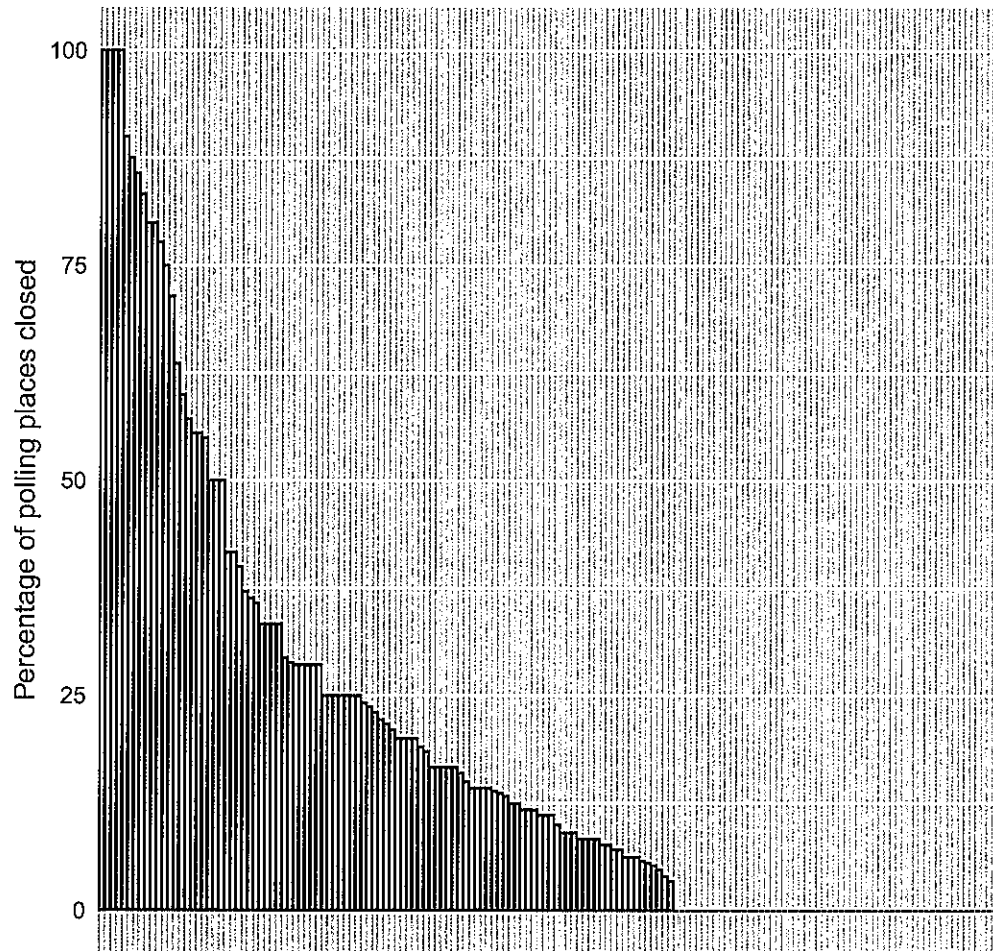
113 I assembled a list containing the polling places that appeared in the 2014 voterfile but did not appear in the 2018 voterfile. This lists contains 459 polling places, and this is the total number of polling places that, to the best of my knowledge, closed in Georgia between the 2014 and 2018 General Elections.

114 The rate of polling place closure by county varied across Georgia. This is depicted in Figure 2, which is a bar plot with 105 bars. The height of each bar describes the percentage of a county's precincts whose polling places closed between 2014 and 2018, and it is evident in this figure that four counties in Georgia closed all (100 percent) of their 2014 polling places. This does not mean, of course, that voters in these counties had nowhere to vote on election day in 2018. Rather, this finding means that every registered voter in these four counties had a new place to vote on election day in 2018 compared to where he or she voted on election day in 2014.

115 I noted that there are 101 bars in Figure 2. Insofar as there are 159 counties in Georgia, it follows that 58 counties in the state did not close any polling places between the 2014 and 2018 General Elections.

116 Figure 2 shows percentages rather than raw numbers of polling places closed, and this is because Georgia counties varied in 2014 in the

Figure 2: Percentages of polling places closed, 2014 to 2018, by county

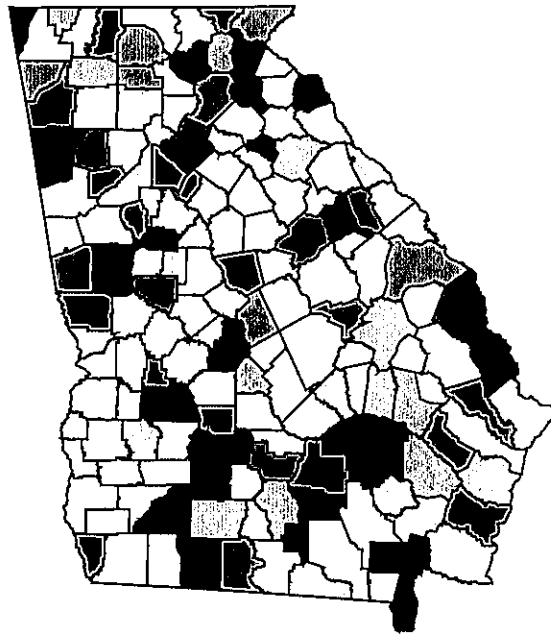


Note: each bar in the figure represents one Georgia county.

number of precincts that they had. If Figure 2 were to plot raw numbers of closed polling places, it would risk being confounded by the fact that more populous counties in Georgia may have more such closures simply because

they have more polling places in the first place.

Figure 3: Map of Georgia counties and percentages of precincts closed, 2014 to 2018



Note: county shading proportional to percentage of precincts closed.

117 Figure 3 shows the spatial distribution of polling place closure rates across Georgia. The darker a county in the map, the greater the closure percentage. In contrast, lightly shaded counties had low polling place closure percentages.

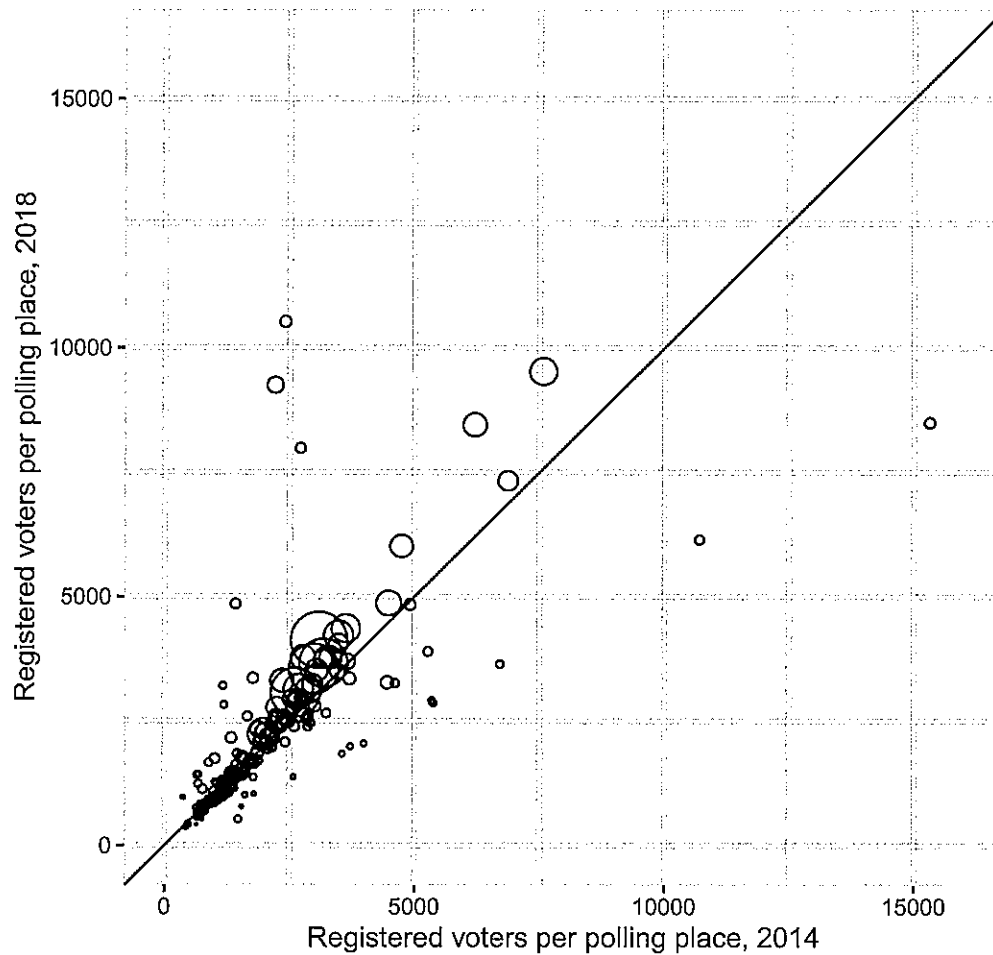
118 The implication of Figure 3 is that 2014-2018 polling place closure rates varied spatially. It is not the case, that is, that all geographic regions of Georgia had similar rates of polling place closure. This was evident in Figure 2's barplot as well.

119 The consequence of polling place closures across Georgia is that many counties had more registered voters per precinct address in 2018 than in 2014. This is shown in Figure 4.

120 In particular, Figure 4 plots by county registered voters per polling place for 2014 and for 2018, and the figure contains a dashed 45-degree line. Each point in the figure denotes a county, and there are 159 points in the figure. Each point is sized proportionally to the number of registered voters in the county in 2018. This is because larger counties are more meaningful statistically than smaller counties, all things equal.

121 County points that lie above the pictured dash line in Figure 4 had more registered voters per polling place in 2018 than in 2014. As the figure shows, most Georgia counties had more registered voters per polling place

Figure 4: Registered voters per polling place, 2014 to 2018, by county



Note: county points are sized in proportion to total registered voters in 2018

address in 2018 than in 2014. The exceptions to this rule are a set of sparsely populated counties whose points lie below the 45-degree line in Figure 4.

5.2 Polling place closures and race

122 In the overview of this report, I noted that the objective of this report is assessing whether polling place closures in Georgia between 2014 and 2018 were racially neutral. I turn to this matter now.

123 I have already written that the 2014 Georgia voterfile in this report does not contain a field for registered voter race, and this complicates my assessments of the extent to which polling place closures in the time period 2014-2018 were racially neutral. As described earlier, I offer two approaches to dealing with this matter.

5.2.1 Assessing the racial neutrality of polling place closures using racially homogeneous block groups

124 The analytical approach in this section of the report builds on the brief discussion of racially homogeneous census block groups that appeared earlier in this report. It proceeds as follows.

125 There are 69 census block groups in Georgia in which, based on the 2010-2014 American Community Survey, all citizens of voting age were black. There are similarly 112 census block groups in which all citizens of voting age were white. Any registered voter in Georgia who lives in a block group that is 100 percent black (white) must be black (white) himself or herself.

126 Similarly, if I consider a block group in Georgia that is 99 percent black (white) based on citizen voting age population, I can be almost certain that almost every registered voter in such a block is black (white).

127 Table 2 presents the rates of polling place closures for registered voters in Georgia who lived in racially homogeneous (or near homogeneous) block groups. It allows homogeneity to range from 100 percent down to 95 percent. This is apparent in the table row titled “Cutoff,” which ranges from 100 to 95.

Table 2: Polling place closure rates in racially homogeneous block groups

| Cutoff | Blacks | Whites | Black closure rate | White closure rate | Difference |
|--------|---------|---------|--------------------|--------------------|------------|
| 100 | 47,600 | 88,130 | 26.84 | 24.07 | 2.76 |
| 99 | 65,600 | 121,589 | 25.00 | 24.05 | 0.95 |
| 98 | 103,202 | 204,831 | 25.50 | 23.84 | 1.66 |
| 97 | 137,478 | 321,050 | 23.15 | 21.60 | 1.55 |
| 96 | 184,814 | 415,889 | 21.89 | 20.61 | 1.28 |
| 95 | 227,210 | 538,947 | 19.81 | 20.36 | -0.55 |

128 Each row in Table 2 is associated with a given homogeneity cutoff. For a registered voter in 2014 to be included in the top row, the individual must have resided in 2014 in a completely (100 percent) homogeneous census block group. For a registered voter in 2014 to be included in the table’s second row, the individual must have lived in 2014 in a census block group that was at least 99 percent black or white. The other rows in Table 2 are characterized similarly.

129 The columns in Table 2 titled “Blacks” and “Whites” report the number of registered black and white voters, respectively, who in 2014 lived in racially homogeneous or near homogeneous census block groups. For example, 47,600 registered black voters in Georgia in 2014 lived in census block groups in which 100 percent of the citizen voting age population was black. The comparable white figure is 88,130 registered voters.

130 The column in table 2 named “Difference” reports the black-white difference in polling place closure rates, and the key finding in Table 2 is as follows: the black-white differences in the table are positive down to a homogeneity cutoff of 95 percent. This implies that, in areas of Georgia where we can be certain or reasonably certain of racial composition, black registered voters in 2014 had their polling places closed at greater rates than white registered voters. Indeed, among black registered voters and white registered voters in completely racially homogeneous census block groups, there is almost a three percentage point difference between black and white polling place closure rates.

5.2.2 Assessing the racial neutrality of polling place closures using race data from the 2016 and 2018 voterfiles

131 I now turn to my second approach at dealing with the fact that the 2014 voterfile lacks a race field. This approach uses race information from the 2016 and 2018 voterfiles in place of 2014 race data.

132 To recap my method that combines the 2014, 2016, and 2018 Georgia voterfiles, of the 6,053,385 registered voters in Georgia as of 2014, there are 5,901,060 (approximately 97.48 percent) who remained registered in 2016 and/or in 2018. I can determine this by comparing voter registration numbers in my 2014 voterfile with voter registration numbers in the 2016 and 2018 voterfiles. Insofar as the latter two voterfiles contain fields for race, I can use the data in these fields to characterize race as of 2014.

133 As alluded to earlier, this approach has limitations related to the fact that not all registered voters on the rolls in 2014 were also registered in 2016 and/or in 2018. The limitations are twofold. First, the approach misses approximately 2.52 percent of Georgia registered voters from 2014. Second, and this was discussed at some length earlier, it is based on individuals in Georgia who maintained their registration status in 2014 and later in 2016 and/or 2018. This selects against movers, which is correlated in the United States with voter registration.³⁴ Thus, analyzing only those 2014 Georgia registered voters who were also registered in later years in Georgia leads to a sample of individuals that is disproportionately non-moving. More broadly, any feature that leads an individual to register to vote and then to stay registered will be disproportionately present in a sample of 2014 Georgia registrants that is also registered in 2016 and/or 2018.

³⁴For example, see the April 2019 Census Bureau report, "Voting and Registration in the Election of November 2018," Table 7, available at <https://www.census.gov/data/tables/time-series/demo/voting-and-registration/p20-583.html> (last accessed February 9, 2020).

134 Table 3 breaks down the 2014 voterfile by race group and closed polling place status. The largest racial group consists of which registered voters, of whom there are over three million. The rows in Table 3 are sorted by rate of polling place closure.

Table 3: Polling place closure rates by race

| Race | Registered voters | Closed | Percent closed |
|-------------------------|-------------------|---------|----------------|
| White | 3,382,774 | 564,248 | 16.68 |
| Black | 1,793,723 | 301,291 | 16.80 |
| Unknown | 440,377 | 79,856 | 18.13 |
| Hispanic | 121,369 | 19,727 | 16.25 |
| Asian/Pacific Islander | 93,003 | 12,410 | 13.34 |
| Other | 66,081 | 10,671 | 16.15 |
| American Indian/Alaskan | 3,385 | 519 | 15.33 |

135 Table 3 shows that the black polling place closure rate in 2014 (approximately 16.80 percent) is greater than the white polling place closure rate (approximately 16.68 percent). This yields a black-white difference of 0.12 percentage points. Like the earlier homogeneous census block group analysis, this analysis finds that black registered voters had polling place closure rates greater than white registered voters.

5.2.3 Black majority precincts and polling place changes

136 For another perspective on the polling place closures that took place in Georgie between 2014 and 2018, I classified each of the 2,516 polling places that were used in the 2014 General Election as having a black majority or

not. To carry out this classification exercise, I assume that a registered voter associated with a given polling place in 2014 is black if and only if this individual can be linked to a registration record of a black individual in 2016 or 2018.

137 My use of this method of classifying black registered voters means that I am selecting against black registered voters. I am confident that some black registered voters who appear in the 2014 voterfile cannot be linked with 2016 or 2018 registered voters because, for example they passed away or moved out of Georgia between 2014 and 2018. I treat these individuals as non-black, and this means that I am almost certainly classifying as white a collection of registered voters in 2014 who are actually black. My results in this section of the report thus understate the number of black majority polling places.

Table 4: Closures among black majority polling places

| Black majority | Closed | Count |
|----------------|--------|-------|
| No | No | 1,625 |
| No | Yes | 349 |
| Yes | No | 432 |
| Yes | Yes | 110 |

138 Table 4 reports the results of classifying the 2,516 polling places in use in Georgia in 2014 based on black registered voter majority status. The top two rows of Table 4 describe the 1,974 polling places that do not have

a black majority. The bottom two rows of Table 4 provide counts of polling places that have a black majority. There are 542 of these.

139 Table 5 in turn describes polling place closure rates by black majority status. In particular, the closure rate among non-black majority polling places is approximately 17.7 percent. In contrast, the closure rate among black majority polling places is approximately 20.3 percent.

Table 5: Closure rates in black majority polling places

| Racial group | Polling places | Closure rate |
|--------------------|----------------|--------------|
| Not black majority | 1,974 | 17.68 |
| Black majority | 542 | 20.30 |

140 It thus follows from Table 5 that black majority polling place in 2014 were more likely to close than non-black majority precincts. The gap in closure rates between these two types of precincts is approximately 2.6 percentage points. This implies that polling place closures in Georgia in the period 2014 to 2018 were not racially neutral and in particular that such closures disproportionately affected black majority polling places in Georgia in the time period 2014 to 2018.

141 To ensure that the results in Table 5 are not dependent on my use of 50 percent as a potentially arbitrary threshold for characterizing black majority precincts, I repeated the calculations that support Tables 4 and 5 using 60 percent as a cutoff for a black supermajority district. Here, the

prefix “super” on “supermajority” denotes that the threshold for identifying a majority black district is greater than 50 percent. The result of this exercise is Table 5.

Table 6: Closure rates in black supermajority polling places

| Racial group | Polling places | Closure rate |
|--------------------|----------------|--------------|
| Not black majority | 2,106 | 17.76 |
| Black majority | 410 | 20.73 |

142 Among polling places that are at least 60 percent black, the polling place closure rate is approximately 20.7 percent. Among other polling place, the close rate is lower, approximately 17.8 percent. It thus follows that there is no qualitative difference between the results in Table 6 (black majority polling places need to be at least 60 percent black) and Table 5 (black majority polling places need to be at least 50 percent black). Together these two tables imply that, black majority polling places were disproportionately likely to close in Georgia between 2014 and 2018. This implies that precinct address closures in Georgia in this period were not racially neutral.

5.3 Race and new polling place assignments among non-movers in Georgia in the period 2014 to 2018

143 The results in this report have thus far focused on the rates at which polling places closed in Georgia between the 2014 and 2018 General Elections. However, polling place closure is not the only way that a Georgia

registered voter in 2014 could have been affected by reprecincting exercises that took place in Georgia between the two aforementioned general elections. Namely, a registered voter in Georgia could have been assigned a new polling place between 2014 and 2018 even if the voter's original polling place had not been closed. This observation leads me to analyze the rates at which Georgia registered voters in 2014 were assigned to different polling places in 2018, regardless of whether or not such a reassignment was due to a polling place closure.

5.3.1 Overview of non-movers

144 The set of individuals who can contribute to an analysis of the types of registered voters who received new polling places in the period 2014 and 2018 is limited to those Georgia registered voters who appear in both the 2014 and 2018 voterfiles and who did not move between 2014 and 2018. The reason for such a focus on non-movers in particular is that registered voters in Georgia who moved between 2014 and 2018 may have, by virtue of moving, caused themselves to be placed in new precincts, thus receiving new polling places. It would incorrect to attribute new precincts due to moving to a reprecincting exercise.

145 My analysis of non-movers in Georgia who were registered to vote in Georgia between 2014 and 2018 selects against black registered voters. This is because, as I have already, black individuals tend to move more than white

individuals. Therefore, the conclusions that I describe in this section of my report based on non-movers will understate the effects on black registered voters.

146 Table 7 describes the racial breakdown of 5,245,862 registered voters who appear in the 2014 and 2018 Georgia voterfiles and who have valid 2018 race codes. Ten registered voters are dropped from this table, which explains why 5,245,862 is ten fewer than 5,245,872, the total number of registered voters in 2014 who can be matched to a record in 2018.

Table 7: Distribution of race among registered voters in both the 2014 and 2018 Georgia voterfiles

| Race | Count | Percent |
|-------------------------|-----------|---------|
| White | 3,020,291 | 57.57 |
| Black | 1,596,440 | 30.43 |
| Unknown | 376,139 | 7.17 |
| Hispanic | 106,813 | 2.04 |
| Asian/Pacific Islander | 83,047 | 1.58 |
| Other | 58,880 | 1.12 |
| American Indian/Alaskan | 4,252 | 0.08 |
| Total | 5,245,862 | 100.00 |

147 Per Table 7, slightly over 57 percent of Georgia registered voters who appear in both the 2014 and 2018 voterfiles are white. The next largest racial group is black with approximately 30 percent. Approximately seven percent of Georgia registered voters who appear in both the 2014 and 2018 voterfiles have unknown races, and slightly more than two percent are Hispanic.

5.3.2 The distribution of race among non-moving Georgia registered voters

148 Table 8 describes the racial breakdown of 3,620,211 non-moving Georgia registrants who were registered to vote in both 2014 and 2018, and the structure of this table parallels that of the previous Table 7, which covered both movers and non-movers in Georgia. Table 8 uses race codes from the 2018 voterfile and drops individuals with clearly erroneous race codes.

Table 8: Distribution of race among non-moving registered voters in both the 2014 and 2018 Georgia voterfiles

| Race | Count | Percent |
|-------------------------|-----------|---------|
| White | 2,175,030 | 60.08 |
| Black | 1,026,693 | 28.36 |
| Unknown | 254,885 | 7.04 |
| Hispanic | 67,006 | 1.85 |
| Asian/Pacific Islander | 57,617 | 1.59 |
| Other | 36,745 | 1.01 |
| American Indian/Alaskan | 2,235 | 0.06 |
| Total | 3,620,211 | 100.00 |

149 The numbers and percentages in Table 8 show that focusing on non-movers in Georgia between 2014 and 2018 leads to a disproportionately more white, and disproportionately less black, set of registrants. This is evident in the fact that approximately 60 percent of non-movers are white yet approximately 57.6 percent of all Georgia registrants are white (both percentages, of course, condition on a registered voter being in both the 2014 and 2018 voterfiles). Similarly, approximately 28.4 percent of non-movers are black

while approximately 30.4 percent of all registrants are black. Thus, black registered voters are underrepresented, and white registered voters overrepresented, among non-moving registrants in Georgia between 2014 and 2018.

150 Overall the Georgia-wide percentage at which non-movers who were registered in both 2014 and 2018 received new polling places is approximately 18 percent. This covers non-moving registered voters whose polling places were closed between 2014 and 2018 and also those whose polling places were not closed yet were nonetheless assigned to new such places.

151 Table 9 breaks down by new polling place status all non-moving registered voters in Georgia who appear in both the 2014 and 2018 voterfiles. This table covers 3,619,508 registrants, which is 703 fewer than 3,620,211. The reason for this discrepancy is that a very small number of Georgia registered voters have unknown polling places in either 2014 or 2018, and for this small set of individuals it is not possible to determine if they had new polling places in 2018 compared to 2014.

152 The key result in Table 9 is that black voters who were registered as of 2014 were assigned to new polling places at greater rates than white registered voters. Among non-moving registered voters with polling places in 2018 compared to 2014, approximately 59 percent are white. This percentage *increases* to approximately 60 among non-moving registered voters who were not assigned new precincts in 2018 compared to 2014. This increase is evident

Table 9: Distribution of race and new polling place status among non-moving registered voters in both the 2014 and 2018 Georgia voterfiles

| Race | New place | Not new place | Difference |
|-------------------------|-----------|---------------|------------|
| White | 59.37 | 60.26 | 0.89 |
| Black | 28.85 | 28.23 | -0.62 |
| Unknown | 7.61 | 6.91 | -0.70 |
| Hispanic | 1.80 | 1.86 | 0.06 |
| Asian/Pacific Islander | 1.32 | 1.65 | 0.33 |
| Other | 1.00 | 1.02 | 0.02 |
| American Indian/Alaskan | 0.05 | 0.06 | 0.01 |
| Total | 100.00 | 100.00 | |

in Table 9's *positive* value in the "Difference" column for white registered voters.

153 In contrast, Table 9's black percentage change *decreases* from almost 29 to approximately 28 percentage points when looking at from non-moving registered voters who were not assigned new polling places in 2018 compared to 2014 compared to those who were assigned new polling places. This increase is evident in Table 9's *negative* value in the "Difference" columns for black registered voters.

154 The black and white comparisons in Table 9 are underestimates of the extent to which black registered voters in Georgia, in contrast to white registered voters, received new polling places in 2018 compared to 2014. This is because Table 9 by design selects against movers (who are disproportionately black). Black registered voters who received new polling places in 2018 compared to 2014 and moved in this time period are not

incorporated in Table 9. Even so, Table 9 shows that the assignment of new polling places in Georgia between 2014 and 2018 was not racially neutral and in particular that black registered voters were more likely than white registered voters to be assigned to new polling places.

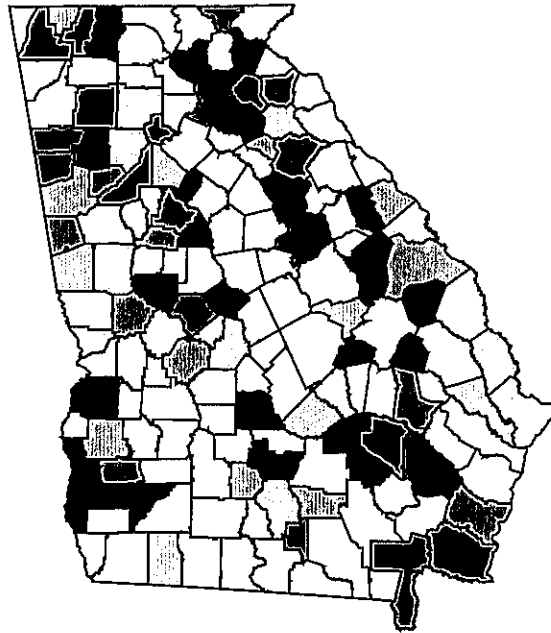
5.3.3 Variance across Georgia counties in the rates at which non-movers received new polling places in 2018 compared to 2014

155 The statewide new polling place rate of approximately 18 percent notwithstanding, there was considerable variance across Georgia's 159 counties in the rates at which non-movers received new polling places. This can be seen in Figure 5, which is a map of Georgia counties shaded by the percentage of non-movers who had new polling places in 2018 compared to 2014.

156 The implication of Figure 5 is that any complications that Georgia registered voters faced on account of having been assigned new polling places between 2014 and 2018 would not have been uniformly distributed across the state. Instead, these complications would have been concentrated in a set of counties.

157 For Georgia's 159 counties, rates of the extent to which non-moving registered voters in Georgia received new polling places in 2018 compared to 2014 are displayed in Figure 6.

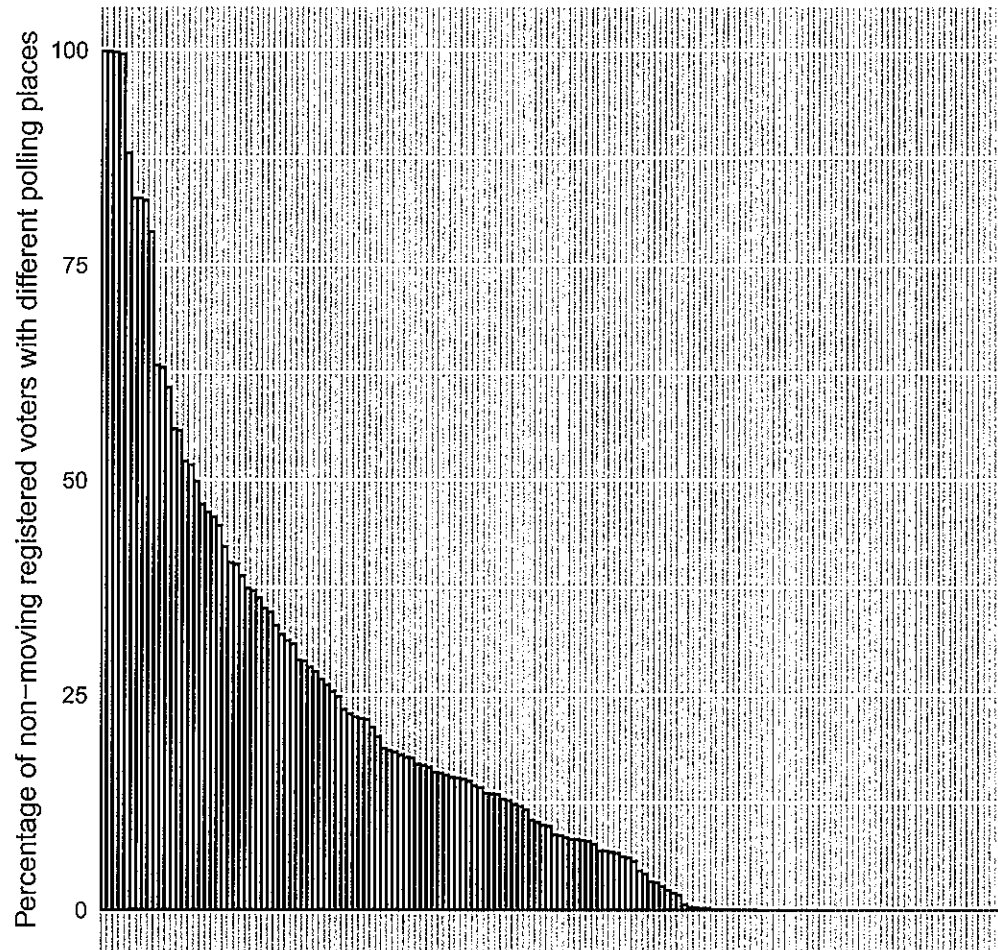
Figure 5: Map of Georgia counties and the extent to which non-moving registered voters had new polling places in 2018 compared to 2014



Note: county shading proportional to percentage of non-movers who had new polling places in 2018 compared to 2014.

158 Figure 6 is a barplot. As in earlier barplots presented in this report, each vertical bar in the figure corresponds to a single Georgia county, and the

Figure 6: Rates at which non-moving registered voters in Georgia had new polling places in 2018 compared to 2014, by county



Note: each bar in the figure represents one Georgia county.

height of a bar indicates the percentage of non-moving registered voters in a county who had new polling places in 2018 compared to 2016. The tallest bar

(100 percent) is from Butts County, where all 9,747 non-moving registered voters had new polling places in 2018.³⁵ The next tallest bar corresponds to Jackson County, and its height is very close to 100 percent.

159 Of Georgia's 159 counties, 31 contained no non-moving registered voters who were assigned new polling places in 2018 compared to 2014. Moreover, 51 counties had between zero and ten non-moving registered voters who had new polling places in 2018. These 49 counties are the reason behind the area to the right of the vertical bars in Figure 6. In this area, bars have either no height at all or only a tiny height that is essentially not visible.

5.3.4 Racial variance across counties in the rates at which non-movers received new polling places in 2018 compared to 2014

160 I now turn to the subject of racial variance across Georgia counties in the rates at which non-moving voters received new polling places in 2018 compared to 2014.

161 For each Georgia county, I identify the number of white non-moving registered voters who received new polling places in 2018 compared to 2014 and the number of white non-moving registered voters. The ratio of these

³⁵Butts County had five polling places in 2016, and they were located at the Butts County Community Center, Jenkinsburg City Hall, Macedonia Baptist Church (called "Stark" in the 2016 precinct list), Towaliga Baptist Church, and Worthville Baptist Church. As of 2018, Butts County had one place polling, located at the Election Office Administration Building.

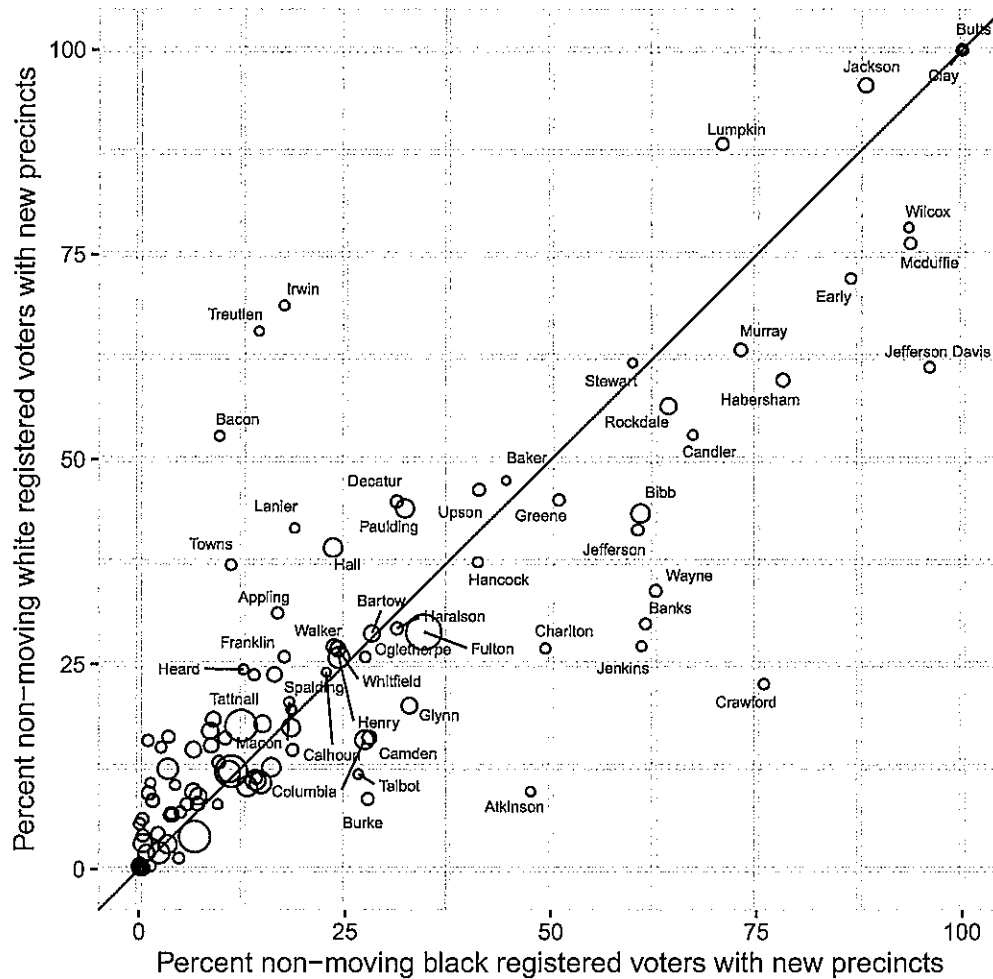
two quantities (multiplied by 100) yields the percentage of white non-movers who received new polling places in 2018.

162 I carry out a similar calculation for black registered voters and plot the white percentage of non-movers who had new polling places against the corresponding black percentage. This yields Figure 7, in which each point denotes a Georgia county. County points in the figure are sized proportionally to total number of registered voters in 2018.

163 Insofar as Figure 7 is based on comparing 2014 polling places to 2018 polling places, by construction it incorporates only registered voters in Georgia who appear in both the 2014 and 2018 voterfiles. The figure, therefore, selects on non-moving status, meaning that registered voters in Georgia as of 2014 who moved prior to 2018 are not included in the figure.

164 The scatterplot in Figure 7 contains a dashed 45-degree line. Counties whose points fall on the line had identical white and black new polling place rates (among non-moving registered voters who appear in the 2014 and 2018 Georgia voterfiles); counties whose points fall above the 45-degree line had greater white new polling place rates than corresponding black rates; and, counties whose points fall below the pictured 45-degree line had greater black new polling place rates than white new precinct rates.

Figure 7: Rates at which non-moving registered voters were assigned new polling places, by race and county



Note: county point size proportional to number of registered voters in 2018.

165 There is a small collection of counties in Figure 7 in which the white new polling place rate is much greater than the corresponding black

rate. The counties of Bacon, Irwin, and Treutlen are exemplars of this. Crawford County illustrates the opposite pattern: the black new polling place rate is much greater than the corresponding white rate. Roughly, Figure 7 shows that there is a large collection of counties (56 in particular) in which black registered voters received new polling places at rates greater than white registered voters.

5.4 New polling places and voter turnout in the 2018 General Election

166 I now consider the extent to which receiving a new polling place in the time period 2014 to 2018 is associated with turnout in the 2018 General Election. This is an important subject because it speaks to potential consequences of the fact that thousands of Georgia registered voters received new polling places between 2014 and 2018. I have already shown that the extent to which 2014 registered voters in Georgia received new polling places in the period 2014 to 2018 was not racially neutral. Now I ask whether there is evidence that receiving a new polling place has downstream consequences for voters. If so, this would compound the lack of racial neutrality in the reprecincting that occurred in Georgia between 2014 and 2018.

5.4.1 Statewide turnout in the 2018 General Election

167 Statewide, among non-moving Georgia registrants who received new polling places between 2014 and 2018, the 2018 General Election turnout rate was approximately 62.9 percent. Among non-moving Georgia registrants who did not receive new polling places, the 2018 turnout rate was approximately 64.2 percent. Thus, receiving a new polling place in the period 2014 to 2018 is associated with a 2018 General Election turnout gap of approximately 1.35 percentage points.

5.4.2 Turnout in the 2018 General Election broken down by race

168 I now disaggregate this Georgia-wide result by race. To that end, Table 10 focuses on non-movers in Georgia who were registered to vote in both 2014 and 2018. The table breaks down these registered voters by the race groups that have appeared throughout this report and also by the extent to which the registered voters received new polling places between 2014 and 2018.

Table 10: 2018 General Election turnout by race

| Race | 2014 voters | New place | Not new | Difference |
|-------------------------|-------------|-----------|---------|------------|
| White | 2,172,086 | 67.03 | 68.01 | -0.98 |
| Black | 1,024,340 | 60.63 | 62.57 | -1.94 |
| Unknown | 254,348 | 47.84 | 48.32 | -0.49 |
| Hispanic | 66,903 | 44.60 | 47.20 | -2.60 |
| Asian/Pacific Islander | 57,499 | 49.12 | 49.45 | -0.33 |
| Other | 36,657 | 49.60 | 51.90 | -2.30 |
| American Indian/Alaskan | 2,227 | 41.95 | 48.75 | -6.80 |

169 Consider the top row of Table 10. According to this row, of the approximately 2.1 million non-moving white registered voters in 2014 who were also registered in 2018, approximately 67 percent of those who received new polling places between 2014 and 2018 turned out to vote in 2018. In contrast, approximately 68 percent of those who did not receive new polling places between 2014 and 2018 turned out to vote in 2018. In other words, a white registered voter receiving a new polling place in the period 2014 to 2018 is associated with a turnout drop of approximately one percentage point.

170 Now I turn to the approximately one million non-moving black voters covered in Table 10. The 2018 turnout rate among those individuals who received new polling places between 2014 and 2018 is approximately 60.6 percent, and the corresponding turnout rate for black registered voters who did not receive new polling places is approximately 62.6 percent. Thus, a black registered voter receiving a new polling place in the period 2014 to 2018 is associated with a turnout drop of approximately two percentage points.

171 With respect to its focus on racial groups in Georgia, this report has for the most part restricted its attention to black and white registered voters, the two largest racial groups in Georgia's registered voter pool. Looking beyond these groups, Table 10 highlights a sizable Hispanic effect. Namely, non-moving Hispanic registered voters who received new polling places between 2014 and 2018 were less likely to vote in the 2018 General Election

compared to non-moving Hispanic registered voters who did not receive new polling places between in this time frame.

172 Among non-moving black and white registered voters in Georgia who were on the voter rolls in both 2014 and 2018, those who received new polling places between 2014 and 2018 had lower turnout rates in the 2018 General Election. This statement applies to every race group considered in Table 10. Such a result testifies to the non-racial neutrality of downstream consequences of the extent to which registered voters in Georgia received new polling places in the time period 2014 to 2018.

173 I now take all of the registered voters described in Table 10 and consider the subset of this group that consists of individuals who voted in the 2014 General Election. I then re-calculate the statistics in the table, and this yields Table 11.

Table 11: 2018 turnout by race among 2014 voters

| Race | 2014 voters | New place | Not new | Difference |
|-------------------------|-------------|-----------|---------|------------|
| White | 1,256,834 | 87.44 | 87.70 | -0.26 |
| Black | 529,624 | 87.51 | 88.40 | -0.88 |
| Unknown | 95,376 | 82.05 | 81.91 | 0.14 |
| Hispanic | 18,985 | 80.04 | 80.43 | -0.39 |
| Asian/Pacific Islander | 16,253 | 81.45 | 82.59 | -1.14 |
| Other | 13,551 | 81.66 | 83.35 | -1.69 |
| American Indian/Alaskan | 723 | 86.27 | 81.80 | 4.47 |

174 Table 11 restricts attention to ostensibly politically active individuals. This is evident in the higher turnout percentages compared to the earlier Table 10.

175 Even among politically active registered voters, being assigned a new voting place between 2014 and 2018 is associated with lower 2018 General Election turnout. This follows from the fact that the percentages in the “Not new place” column in Table 11 are, for most of the racial groups in the table (this statement includes white and black registered voters), greater than corresponding percentages in the “New place” column. Moreover, the black decrease in 2018 General Election turnout is greater in magnitude than the white decrease.

5.4.3 Election day turnout in the 2018 General Election

176 I now consider election day turnout in the 2018 General Election. If polling place changes led to decreased turnout, as suggested by the analysis above, then I would expect to see similar if not greater effects on election day turnout *per se*.

177 Parallel to the analyses shown above, Table 12 reports election day turnout rates in the 2018 General Election by race. For example, among non-moving white registered voters, approximately 27 percent of those who received new polling places between 2014 and 2018 voted on election day in November 2018. In contrast, approximately 31 percent of registered voters

Table 12: 2018 General Election turnout by race, election day only

| Race | 2014 voters | New place | Not new | Difference |
|-------------------------|-------------|-----------|---------|------------|
| White | 2,172,086 | 26.57 | 31.22 | -4.65 |
| Black | 1,024,340 | 21.45 | 24.28 | -2.83 |
| Unknown | 254,348 | 19.92 | 22.40 | -2.49 |
| Hispanic | 66,903 | 23.83 | 27.29 | -3.46 |
| Asian/Pacific Islander | 57,499 | 22.51 | 25.63 | -3.12 |
| Other | 36,657 | 21.22 | 24.95 | -3.73 |
| American Indian/Alaskan | 2,227 | 16.67 | 25.17 | -8.51 |

who did not receive new polling places between 2014 and 2018 voted on election day in November 2018. The difference between these two quantities is negative, indicating that, for white registered voters, receiving a new polling place in the 2014 to 2018 time frame is associated with a decreased likelihood of voting on election day in the 2018 General Election.

178 I find a similar, albeit of smaller magnitude, finding for the election day turnout rate in the 2018 General Election among non-moving black registered voters. Moreover, all of the differences in Table 12 are negative. This implies that, for non-moving registered voters of all races, receiving a new polling place in the 2014 to 2018 time frame is associated with a decreased likelihood of voting on election day in the 2018 General Election.

179 Table 13 restricts attention to non-moving registered voters who voted in the 2014 General Election. Among these individuals, receiving a new polling place between 2014 and 2018 is associated with lower election day turnout in the 2018 General Election. This regularity is apparent in all

Table 13: 2018 turnout by race among 2014 voters, election day only

| Race | 2014 voters | New place | Not new | Difference |
|-------------------------|-------------|-----------|---------|------------|
| White | 1,256,834 | 31.33 | 37.61 | -6.27 |
| Black | 529,624 | 26.57 | 30.35 | -3.77 |
| Unknown | 95,376 | 28.91 | 33.34 | -4.42 |
| Hispanic | 18,985 | 36.48 | 41.78 | -5.31 |
| Asian/Pacific Islander | 16,253 | 32.68 | 40.42 | -7.74 |
| Other | 13,551 | 30.43 | 35.47 | -5.04 |
| American Indian/Alaskan | 723 | 27.45 | 38.16 | -10.71 |

race groups, as the negative “Difference” entries in Table 13 makes clear.

6 Conclusion

180 This report assesses polling place closures made across Georgia in the 2014 to 2018 time period. As of 2014, there were 2,516 polling places in the state. By 2018, 459 had closed, and this affected over one million registered voters in Georgia, all of whom were assigned new polling places in time for the 2018 General Election.

181 Using a variety of approaches and data on millions of Georgia registered voters, I have shown that black registered voters, compared to white registered voters, were disproportionately affected by Georgia’s polling place closures in the period 2014 to 2018. This implies that the polling place closures that took place in Georgia were not racially neutral.

182 Existing literature in political science provides evidence that eligible voters whose voting places change are less likely to vote in future elections. I have shows that patterns in turnout in Georgia in the 2018 General Election are consistent with this result. Compared to individuals whose polling places in Georgia did not change prior to the 2018 General, those registered voters who were assigned new polling place between 2014 and 2018 were less likely to vote, and less likely to vote on election day, in November 2018. Such downstream effects of polling place closures will magnify the racial biases in the closures themselves.

7 Appendix: *curriculum vitae* of Michael C.
Herron

Michael C. Herron

Dartmouth College
Department of Government
6108 Silsby Hall
Hanover, NH 03755-3547

Phone: +1 (603) 646-2693
Mobile: +1 (603) 359-9731
Email: michael.c.herron@dartmouth.edu
Homepage: <http://www.dartmouth.edu/~herron>

Academic appointments

William Clinton Story Remsen 1943 Professor, Department of Government, Dartmouth College. July 2013–present.

Chair, Program in Quantitative Social Science, Dartmouth College. July 2015–present.

Visiting Scholar, Hertie School of Governance, Berlin, Germany. August 2016–July 2017.

Chair, Program in Mathematics and Social Sciences, Dartmouth College. July 2014–June 2015.

Professor, Department of Government, Dartmouth College. July 2009–June 2013.

Visiting Professor of Applied Methods, Hertie School of Governance, Berlin, Germany. August 2011–August 2012.

Associate Professor, Department of Government, Dartmouth College. July 2004–June 2009.

Visiting Associate Professor, Department of Government, Harvard University. July 2008–January 2009.

Visiting Associate Professor, Wallis Institute of Political Economy, University of Rochester. September 2006–December 2006.

Visiting Assistant Professor, Department of Government, Dartmouth College. July 2003–June 2004.

Assistant Professor, Department of Political Science, Northwestern University. September 1997–June 2004.

Faculty Associate, Institute for Policy Research, Northwestern University. September 2002–June 2004.

Education

PhD Business (Political Economics), Stanford University, January, 1998.

Dissertation: Political Uncertainty and the Prices of Financial Assets

Committee: David Baron, Darrell Duffie, Douglas Rivers, and Barry Weingast

MS Statistics, Stanford University, June 1995.

MA Political Science, University of Dayton, August 1992.

BS Mathematics and Economics, with University Honors, Carnegie Mellon University, May 1989.

Michael C. Herron

2

Fellowships

Elizabeth R. and Robert A. Jeffe 1972 Fellowship, Dartmouth College. September 2010–June 2011.

Fulbright Scholar Program fellowship for research and teaching at the Heidelberg Center for American Studies, Heidelberg University, September 2009 - February 2010 (declined).

Post-doctoral Research Fellow, Center for Basic Research in the Social Sciences, Harvard University. September 2000–August 2001.

Publications

Journal articles

"Voting lines, equal treatment, and early voting check-in times in Florida" (with David Cottrell and Daniel A. Smith). Forthcoming, *State Politics & Policy Quarterly*.

"Early voting changes and voter turnout: North Carolina in the 2016 General Election" (with Hannah L. Walker and Daniel A. Smith). *Political Behavior* 41(4): 841-869. 2019.

"Mail-in absentee ballot anomalies in North Carolina's 9th Congressional District." *Election Law Journal* 18(3): 191-213. 2019.

"Relative age effects in American professional football" (with Jack F. Heneghan). *Journal of Quantitative Analysis in Sports* 15(3): 185-202. 2019.

"Mortality, Incarceration, and African-American Disenfranchisement in the Contemporary United States" (with David Cottrell, Javier M. Rodriguez, and Daniel A. Smith). *American Politics Research* 47(2): 195-237. 2019.

"Pedagogical Value of Polling Place Observation By Students" (with 31 co-authors). *PS: Political Science & Politics* 51(4): 831-847. 2018.

"All in the family: German twin finishing times in the 2016 women's Olympic marathon" (with David Cottrell). *CHANCE* 31(3): 20-28. 2018.

"An Exploration of Donald Trump's Allegations of Massive Voter Fraud in the 2016 General Election" (with David Cottrell and Sean J. Westwood). *Electoral Studies* 51(1): 123-142. 2018.

"Student Sorting and Implications for Grade Inflation (with Zachary D. Markovich). *Rationality and Society* 29(3): 355-386. 2017.

"Race, Shelby County, and the Voter Information Verification Act in North Carolina" (with Daniel A. Smith). *Florida State University Law Review* 43: 465-506. 2016.

"Precinct Resources and Voter Wait Times" (with Daniel A. Smith). *Electoral Studies* 42(2): 249-263. 2016.

"A Careful Look at Modern Case Selection Methods" (with Kevin M. Quinn). *Sociological Methods & Research* 45(3): 458-492. 2016.

"Precinct Closing and Wait Times in Florida during the 2012 General Election" (with Daniel A. Smith). *Election Law Journal* 14(3): 220-238. 2015.

"Race, Party, and the Consequences of Restricting Early Voting in Florida in the 2012 General Election" (with Daniel A. Smith). *Political Research Quarterly* 67(3): 646-665. 2014.

Michael C. Herron

3

- "The Effects of House Bill 1355 on Voter Registration in Florida" (with Daniel A. Smith). *State Politics & Policy Quarterly* 13(3): 279-305. 2013.
- "Blacks, Hispanics, and Whites: A Study of Race-based Residual Vote Rates in Chicago." *American Politics Research* 41(2): 203-243. 2013.
- "Alvin Greene? Who? How did he win the United States Senate nomination in South Carolina?" (with Joseph Bafumi, Seth J. Hill, and Jeffrey B. Lewis). *Election Law Journal* 11(4): 358-379. 2012.
- "Souls to the Polls: Early Voting in Florida in the Shadow of House Bill 1355" (with Daniel A. Smith). *Election Law Journal* 11(3): 331-347. 2012.
- "Leapfrog Representation and Extremism: A Study of American Voters and their Members in Congress" (with Joseph Bafumi). *American Political Science Review* 104(3): 519-542. 2010.
- "Economic Crisis, Iraq, and Race: A Study of the 2008 Presidential Election" (with Seth J. Hill and Jeffrey B. Lewis). *Election Law Journal* 9(1): 41-62. 2010.
- "Prejudice, Black Threat, and the Racist Voter in the 2008 Presidential Election" (with Joseph Bafumi). *Journal of Political Marketing* 8(4): 334-348. 2009.
- "Voting Technology and the 2008 New Hampshire Primary" (with Walter R. Mebane, Jr., and Jonathan N. Wand). *William & Mary Bill of Rights Journal* 17(2): 351-374. 2008.
- "Ballot Formats, Touchscreens, and Undervotes: A Study of the 2006 Midterm Elections in Florida" (with Laurin Frisina, James Honaker, and Jeffrey B. Lewis). *Election Law Journal* 7(1): 25-47. 2008.
- "Gerrymanders and Theories of Lawmaking: A Study of Legislative Redistricting in Illinois" (with Alan E. Wiseman). *Journal of Politics* 70(1): 151-167. 2008.
- "Estimating the Effect of Redistricting on Minority Substantive Representation" (with David Epstein, Sharyn O'Halloran, and David Park). *Journal of Law, Economics, and Organization* 23(2): 499-518. 2007.
- "Did Ralph Nader Spoil Al Gore's Presidential Bid? A Ballot-Level Study of Green and Reform Party Voters in the 2000 Presidential Election" (with Jeffrey B. Lewis). *Quarterly Journal of Political Science* 2(3): 205-226. 2007.
- "Assessing Partisan Bias in Voting Technology: The Case of the 2004 New Hampshire Recount" (with Jonathan N. Wand). *Electoral Studies* 26(2): 247-261. 2007.
- "Term Limits and Pork" (with Kenneth W. Shotts). *Legislative Studies Quarterly* 31(3): 383-404. 2006.
- "Black Candidates and Black Voters: Assessing the Impact of Candidate Race on Uncounted Vote Rates" (with Jasjeet S. Sekhon). *Journal of Politics* 67(1): 154-177. 2005.
- "Government Redistribution in the Shadow of Legislative Elections: A Study of the Illinois Member Initiatives Grant Program" (with Brett A. Theodos). *Legislative Studies Quarterly* 24(2): 287-312. 2004.
- "Studying Dynamics in Legislator Ideal Points: Scale Matters." *Political Analysis* 12(2): 182-190. 2004.
- "Logical Inconsistency in EI-based Second Stage Regressions" (with Kenneth W. Shotts). *American Journal of Political Science* 48(1): 172-183. 2004.
- "Overvoting and Representation: An examination of overvoted presidential ballots in Broward and Miami-Dade counties Counties" (with Jasjeet S. Sekhon). *Electoral Studies* 22: 21-47. 2003.
- "Using Ecological Inference Point Estimates as Dependent Variables in Second Stage Linear Regressions" (with Kenneth W. Shotts). *Political Analysis* 11(1): 44-64. 2003.

Michael C. Herron

4

"Cross-contamination in EI-R" (with Kenneth W. Shotts). *Political Analysis* 11(1): 77-85. 2003.

"A Consensus on Second Stage Analyses in Ecological Inference Models" (with Christopher Adolph, Gary King, and Kenneth W. Shotts). *Political Analysis* 11(1): 86-94. 2003.

"The Butterfly Did It: The Aberrant Vote for Buchanan in Palm Beach County, Florida" (with Jonathan N. Wand, Kenneth W. Shotts, Jasjeet S. Sekhon, Walter R. Mebane, Jr., and Henry E. Brady). *American Political Science Review* 95(4): 793-810. 2001.

"Interest Group Ratings and Regression Inconsistency." *Political Analysis* 9(3): 260-274. 2001.

"Leadership and Pandering: A Theory of Executive Policymaking" (with Brandice Canes-Wrone and Kenneth W. Shotts). *American Journal of Political Science* 45(3): 532-550. 2001.

"Law and Data: The Butterfly Ballot Episode" (with Henry E. Brady, Walter R. Mebane, Jr., Jasjeet S. Sekhon, Kenneth W. Shotts, and Jonathan N. Wand). *PS: Political Science & Politics* 34(1): 59-69. 2001.

"Cutpoint-Adjusted Interest Group Ratings." *Political Analysis* 8(4): 346-366. 2000.

"Estimating the Economic Impact of Political Party Competition in the 1992 British Election." *American Journal of Political Science* 44(2): 326-337. 2000.

"Artificial Extremism in Interest Group Ratings and the Preferences versus Party Debate." *Legislative Studies Quarterly* 24(4): 525-542. 1999.

"Post-Estimation Uncertainty in Limited Dependent Variable < Models." *Political Analysis* 8(1): 83-98. 1999.

"Measurement of Political Effects in the United States Economy: A Study of the 1992 Presidential Election" (with James Lavin, Donald Cram, and Jay Silver). *Economics & Politics* 11(1): 51-81. 1999.

"The Influence of Family Regulation, Connection, and Psychological Autonomy on Six Measures of Adolescent Functions" (with Melissa R. Herman, Sanford M. Dornbusch, and Jerald R. Herting). *Journal of Adolescent Research* 12(1): 34-67. 1997.

Book chapters

"Wait Times and Voter Confidence: A Study of the 2014 General Election in Miami-Dade County" (with Daniel A. Smith, Wendy Serra, and Joseph Bafumi). In *Races, Reforms, & Policy: Implications of the 2014 Midterm Elections*, Christopher J. Galdieri, Tauna S. Sisco, and Jennifer C. Lucas, eds. Akron, OH: University of Akron Press. 2017.

"A Dynamic Model of Multidimensional Collective Choice" (with David P. Baron). In *Computational Models in Political Economy*, Ken Kollman, John H. Miller, and Scott E. Page, eds. Cambridge, MA: The MIT Press. 2003.

"Law and Data: The Butterfly Ballot Episode" (with Henry E. Brady, Walter R. Mebane Jr., Jasjeet Singh Sekhon, Kenneth W. Shotts, and Jonathan Wand). In *The Longest Night: Polemics and Perspectives on Election 2000*, Arthur J. Jacobson and Michel Rosenfeld, eds. Berkeley: University of California Press. 2002.

Michael C. Herron

5

Book reviews

The Timeline of Presidential Elections: How Campaigns Do (and Do Not) Matter, Robert S. Erikson and Christopher Wlezien. *Political Science Quarterly* 128(3): 552-553. 2013.

Voting Technology: The Not-So-Simple Act of Casting a Ballot, Paul S. Herron, Richard G. Niemi, Michael J. Hanmer, Benjamin B. Bederson, and Frederick C. Conrad. *Review of Policy Research* 25(4): 379-380. 2008.

Other publications

"If more states start using Ohio's system, how many voters will be purged?" (with Daniel A. Smith). *The Washington Post*, Monkey Cage, June 17, 2018.

"Do we have a right not to vote? The Supreme Court suggests we don't" (with Daniel A. Smith). *New York Daily News*, June 12, 2018.

"Nearly 4 million black voters are missing. This is why" (with David Cottrell, Javier M. Rodriguez, and Daniel A. Smith). *The Washington Post*, Monkey Cage, April 11, 2018.

"We can't find any evidence of voting fraud in New Hampshire" (with David Cottrell and Sean Westwood). *The Washington Post*, Monkey Cage, February 28, 2017.

"We checked Trump's allegations of voter fraud. We found no evidence at all" (with David Cottrell and Sean Westwood). *The Washington Post*, Monkey Cage, December 2, 2016.

"High ballot rejection rates should worry Florida voters" (with Daniel A. Smith). *Tampa Bay Times*, October 28, 2012.

"Logistic Regression." *The Encyclopedia of Political Science*, George Thomas Kurian, James E. Alt, Simone Chambers, Geoffrey Garrett, Margaret Levi, and Paula D. McClain, eds., Washington, D.C.: CQ Press. 2010.

"Using XEmacs Macros to Process ASCII Data Files." *The Political Methodologist* 13(2): 13-18. 2005.

"Ohio 2004 Election: Turnout, Residual Votes and Votes in Precincts and Wards" (with Walter R. Mebane, Jr.), in "Democracy At Risk: The 2004 Election in Ohio," report published by the Democratic National Committee. 2005.

"Poisson Regression." *The Encyclopedia of Social Science Research Methods*, Alan Bryman, Michael Lewis-Beck, and Tim Futing Liao, eds. Thousand Oaks, CA: Sage Publications, 2003.

"Pork barrel race to the bottom" (with Brett A. Theodos). *Illinois Issues* 29(2): 22-23. 2003.

"Teaching Introductory Probability Theory." *The Political Methodologist* 10(2): 2-4. 2002.

"Ballot cost Gore thousands of votes" (with Henry E. Brady and Jonathan N. Wand). *The San Diego Union-Tribune*, p. G3, November 19, 2000.

Work in progress

"Did ballot design oust an incumbent senator? A study of the 2018 midterm election in Florida" (with Michael D. Martinez and Daniel A. Smith).

Michael C. Herron

6

Awards

Best Paper Award, State Politics and Policy Section, 2013 Annual Meeting of the American Political Science Association. *Getting Your Souls to the Polls: The Racial Impact of Reducing Early In-Person Voting in Florida* (with Daniel A. Smith).

Grants

Committee for Scholarly Innovation and Advancement Awards, Dartmouth College, February, 2014. Project title: "The Dynamics of Voting Lines in Miami-Dade County." Financial support: \$32,000.

The Rockefeller Center for Public Policy and the Social Sciences, Dartmouth College, May, 2006. Project title: "Large Scale Survey of Americans in Multiple Congressional Districts." Financial support: \$8,500.

National Science Foundation, SES-041849, July, 2004. Project title: "A Ballot-Level Study of Intentional and Unintentional Abstention in Presidential Election Voting." Financial support: \$65,749.

Nelson A. Rockefeller Center for the Social Sciences, Dartmouth College, January, 2004. Project title: "Intentional Invalid Votes in Leon County, Florida." Financial support: \$1,115.

American Enterprise Institute, August, 1999. Project title: "Tenure in Office and Congressional Voting" (with Kenneth W. Shotts). Financial support: \$182,500.

University Research Grants Committee, Northwestern University, February, 1999. Project Title: "Representation, Policy Uncertainty, and Divided Government." Financial support: \$4,087.

Stanford University Graduate School of Business, 1997–1998 Academic Year. Dissertation Research Grant.

Recent conference presentations

"Ballot design, voter intentions, and representation: A study of the 2018 midterm election in Florida," 2019 Annual Meeting of the American Political Science Association, Washington, DC.

"Ballot design, voter intentions, and representation: A study of the 2018 midterm election in Florida," Election Sciences, Reform, and Administration conference, 2019, University of Pennsylvania.

"Did ballot design oust an incumbent senator? A study of the 2018 midterm election in Florida," Congressional Elections & the Presidency: Politics in 2018, March 30, 2019, Saint Anselm College, Manchester NH.

"Estimating the Differential Effects of Purging Inactive Registered Voters," 2018 Annual Meeting of the American Political Science Association, Boston MA.

"Estimating the Differential Effects of Purging Inactive Registered Voters," Election Sciences, Reform, and Administration conference, 2018, University of Wisconsin-Madison.

Keynote address, "Mortality, Incarceration, and African-American Disenfranchisement," *Balancing the Scales: The United States in an Age of Inequality*, November 11, 2016, John F. Kennedy Institute, Freie Universität Berlin.

"Missing Black Men and Representation in American Political Institutions," 2016 Annual Meeting of the Midwest Political Science Association, Chicago, IL.

Michael C. Herron

7

Invited seminars

| | |
|--|---|
| University of Iowa, 1999 | University of Mannheim, 2011 |
| Boston University, 2000 | University of Heidelberg, 2011 |
| Dartmouth College, 2000 | University of Passau, 2012 |
| Harvard University, 2000 | University of Göttingen, 2012 |
| University of Minnesota, 2000 | Freie Universität Berlin, 2012 |
| University of Rochester, 2000 | Laval University, 2012 |
| University of Wisconsin, Madison, 2000 | University of Montreal, 2012 |
| Yale University, 2000 | Middlebury College, 2013 |
| Columbia University, 2001 | University of Illinois, Champaign, 2013 |
| University of California, Berkeley, 2002 | University of Illinois, Chicago, 2013 |
| University of Illinois, 2002 | University of Wisconsin, Madison, 2013 |
| Brown University, 2003 | Yale University, 2014 |
| Temple University, 2003 | University of Virginia, 2015 |
| University of Chicago, 2003 | University of California, San Diego, 2015 |
| New York University, 2004 | American University, 2015 |
| Princeton University, 2004 | Massachusetts Institute of Technology, 2015 |
| University of Michigan, 2005 | Princeton University, 2015 |
| George Washington University, 2006 | University of California, Los Angeles, 2016 |
| Emory University, 2006 | The Ohio State University, 2016 |
| Harvard University, 2007 | Freie Universität Berlin, 2016 |
| Loyola Law School, 2007 | Deutsch-Amerikanisches Institut, Nürnberg, 2017 |
| Columbia University, 2007 | Universität Bonn, 2018 |
| University of Chicago, 2007 | Freie Universität Berlin, 2018 |
| Yale University, 2007 | Northwestern University, 2018 |
| Stanford University, 2008 | University of Pittsburgh, 2019 |
| Columbia University, 2008 | University of Salzburg, 2019 |
| Northwestern University, 2008 | Universität Bonn, 2019 |
| Princeton University, 2008 | Freie Universität Berlin, 2019 |
| Duke University, 2009 | Humboldt University, 2019 |
| Hertie School of Governance, 2010 | University of North Carolina, Charlotte, 2019 |
| Emory University, 2010 | |

Professional activities

Division Chair, Representation and Electoral Systems, 2017 Annual Meeting of the Midwest Political Science Association.

Associate Editor, *Research & Politics*, November, 2016–present.

Editorial Board, *American Politics Research*, September, 2015–present.

Editorial Board, *Political Analysis*, January, 2010–present.

Editorial Board, *USENIX Journal of Election Technology and Systems*, March, 2013–June, 2016.

Editorial Board, *American Political Science Review*, 2010–2012.

Editorial Board, *American Journal of Political Science*, 2006–2009.

“Race, Voting Procedures, and New Developments in Voting Rights,” panel organized for the 2013 Annual Meeting of the Midwest Political Science Association.

Michael C. Herron

8

Division Chair, Formal Theory, 2007 Annual Meeting of the American Political Science Association.
 Co-editor, *The Political Methodologist*, Fall, 2004–Spring, 2006.
 Publications Committee, Society for Political Methodology, 2005–2006, 2015–present.

Dartmouth College activities

Chair, American Politics Search Committee, Department of Government, August 2018–March 2019.
 Chair, Committee on Priorities, July 2015–June 2016.
 Committee on Priorities, July 2013–June 2015.
 American politics search committee, Department of Government, August 2014–December 2014.
 Research Computing Director search committee, October 2013–October 2014.
 Senior Search Committee, Department of Government, 2013.
 Research Computing Advisory Committee, Spring 2013.
 Chair, American Politics Search Committee, Department of Government, 2012–2013.
 Recruitment Planning Committee, Department of Government, 2010 and 2012–2013.
 Committee on Standards, 2008–2010.
 Task Force on Collaboration and Social Software, 2007–2008.
 Biostatistics search committee, Dartmouth Medical School, 2006–2007.
 Research Computing Oversight Committee, 2006.
 Council on Computing, 2005–2007.
 Clement Chair search committee, Department of Government, 2005–2006.

Northwestern University activities

Program Committee, Mathematical Methods in the Social Sciences, 2001–2002.
 American Politics Search Committee, Department of Political Science, 2000–2001, 2001–2002.
 Formal Theory Search Committee, Department of Political Science, 1997–1998.

Teaching interests

Statistical methods: introductory and applied statistics, research design, computing in R, Bayesian statistics.
 American politics: representation, election irregularities, election administration.
 Political economy: game theory.

Michael C. Herron

9

Reviewer for

| | |
|--|--|
| <i>American Journal of Political Science</i> | <i>Political Analysis</i> |
| <i>American Political Science Review</i> | <i>Political Behavior</i> |
| <i>American Politics Quarterly</i> | <i>Political Research Quarterly</i> |
| <i>American Politics Review</i> | <i>Political Science Quarterly</i> |
| <i>British Journal of Political Science</i> | <i>Political Science Research and Methods</i> |
| Cambridge University Press | <i>Political Studies</i> |
| Chapman & Hall | <i>Politics & Gender</i> |
| <i>Congress & the Presidency</i> | <i>Politics, Groups, and Identities</i> |
| <i>Du Bois Review</i> | <i>Polity</i> |
| <i>Economics & Politics</i> | Prentice Hall Higher Education Group |
| <i>Election Law Journal</i> | <i>Proceedings of the National Academy of Sciences</i> |
| <i>Electoral Studies</i> | <i>Public Administration</i> |
| <i>Emerging Markets Finance & Trade</i> | <i>Public Choice</i> |
| <i>Interest Groups & Advocacy</i> | <i>Public Opinion Quarterly</i> |
| <i>Int'l Journal of Environmental Research and Public Health</i> | <i>PS: Political Science and Politics</i> |
| John Wiley & Sons, Inc. | <i>Quarterly Journal of Economics</i> |
| <i>Journal of Legal Studies</i> | <i>Quarterly Journal of Political Science</i> |
| <i>Journal of Money, Credit and Banking</i> | <i>The Social Science Journal</i> |
| <i>Journal of Politics</i> | <i>Social Science Quarterly</i> |
| <i>Journal of Public Economics</i> | <i>Sociological Methods & Research</i> |
| <i>Journal of Race, Ethnicity, and Politics</i> | <i>The Sociological Quarterly</i> |
| <i>Journal of Theoretical Politics</i> | Springer |
| <i>Journal of Women, Politics & Policy</i> | <i>State Politics & Policy Quarterly</i> |
| <i>Legislative Studies Quarterly</i> | Time-Sharing Experiments for the Social Sciences |
| The National Science Foundation | The University of Michigan Press |
| <i>Nonprofit Policy Forum</i> | W. W. Norton & Company |
| <i>Perspectives on Politics</i> | <i>World Politics</i> |
| <i>Policy Studies Journal</i> | |

Foreign language

German: C1 (telc Prüfung, Ausstellung July 27, 2017).

Other employment

Intelligence Analyst and Military Officer, United States Air Force, Foreign Technology Division, Wright-Patterson Air Force Base, 1989–1992.

References

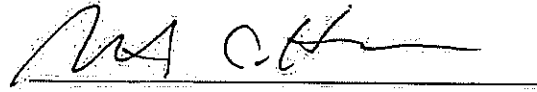
Amos, Brian, Daniel A. Smith and Casey Ste. Claire. 2017. “Reprecincting and Voting Behavior.” *Political Behavior* 39(1):133–156.

Brady, Henry E. and John E. McNulty. 2011. “Turning Out to Vote: The Costs of Finding and Getting to the Polling Place.” *American Political Science Review* 105(1):115–134.

R Core Team. 2019. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing.
URL: <https://www.R-project.org>

StataCorp. 2015. *Stata Statistical Software: Release 14*. College Station, TX: R Foundation for Statistical Computing.
URL: <https://www.stata.com>

I declare under penalty of perjury that the foregoing is true and correct. Executed this 18th day of February 2020, at Hanover, New Hampshire.

A handwritten signature in black ink, appearing to read "Michael C. Herron", is written over a horizontal line.

Michael C. Herron, Ph.D.

CERTIFICATE OF SERVICE

I hereby certify that, on February 18, 2020, I caused to be served the foregoing **REPORT OF PLAINTIFFS' EXPERT WITNESS MICHAEL C HERRON** by filing it through the Court's ECF system, which will serve the following counsel:

Chris Carr, Esq.
Attorney General
Dennis Dunn, Esq.
Deputy Attorney General
Russell Willard, Esq.
Senior Assistant Attorney General
Georgia Office of the Attorney General
40 Capitol Square
Atlanta, GA 30334
ccarr@law.ga.gov
ddunn@law.ga.gov
rwillard@law.ga.gov

Joshua Barrett Belinfante, Esq.
Vincent Robert Russo, Jr., Esq.
Brian Edward Lake, Esq.
Carey Allen Miller, Esq.
Alexander Denton, Esq.
Special Assistant Attorneys General
Robbins Ross Alloy Belinfante Littlefield, LLC
500 Fourteenth St., N.W.
Atlanta, GA 30318
Telephone: (678) 701-9381
Fax: (404) 856-3250
jbelinfante@robbinsfirm.com
blake@robbinsfirm.com
vrusso@robbinsfirm.com
cmiller@robbinsfirm.com
adenton@robbinsfirm.com

Bryan P. Tyson, Esq.
Bryan F. Jacoutot, Esq.
Diana LaRoss, Esq.
Special Assistant Attorneys General
Taylor English Duma LLP
1600 Parkwood Circle
Suite 200
Atlanta, GA 30339
Telephone: (678) 336-7249
btyson@taylorenghish.com
bjacoutout@taylorenghish.com
dlaross@taylorenghish.com

/s/ Leslie J. Bryan
Leslie J. Bryan
Georgia Bar No. 091175

DEFENDANTS' EX. 2

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

FAIR FIGHT ACTION, INC, *et al.*,

Plaintiffs,

v.

BRAD RAFFENSPERGER, *et al.*,

Defendants.

Civ. Act. No. 18-cv-5391 (SCJ)

PLAINTIFFS' INITIAL EXPERT DISCLOSURES

In accordance with the Court's direction at the July 11, 2019, Scheduling Conference and with the Court's Scheduling Order of the same date (ECF No. 78), and consistent with their obligations pursuant to Federal Rule Civil Procedure 26(a)(2), Plaintiffs hereby disclose their expected witnesses whom they may use at trial to present evidence under Federal Rule of Evidence 702, 703, or 705. In this disclosure, and for each person disclosed, Plaintiffs will provide brief biographical information, a curriculum vitae, and a summary of the area of the expert's expected testimony. Then, in accordance with the Court's July 11, 2019, Order, on August 16, 2019, Plaintiffs will provide a written report—compliant with the requirements of Federal Rule of Civil Procedure 26(a)(2)(B)—that discloses a complete statement of all of the opinions the witness will express and the bases therefore; the facts or data that the expert has considered in forming his or her opinions; the



witness's qualifications (including a list of publications authored in the previous ten years); a list of cases in which the witnesses has testified in the previous four years; and a statement of the compensation the expert has received in connection with his or her services in this case.

Plaintiffs reserve the right to supplement this list with additional experts and in response to Defendants' disclosure of expert witnesses.

1. Dr. Khalilah L. Brown-Dean – Dr. Brown-Dean is an associate professor at Quinnipiac University. She holds a PhD and an MS in political science from Ohio State University. She received her undergraduate degree from the University of Virginia. A copy of her curriculum vitae is attached as Exhibit A. Dr. Brown-Dean is expected to testify, generally, about the elections-related duties of the secretary of state under Georgia law and under federal law.

2. Dr. Stephen Graves – Dr. Graves is a professor at the MIT Sloan School of Management. Dr. Graves holds a PhD in operations research and an MS from the University of Rochester. He received his undergraduate degree and an MBA from Dartmouth College. A copy of his curriculum vitae is attached as Exhibit B. Dr. Graves is expected to testify about comparative wait times in lines.

3. Dr. J. Alex Halderman – Dr. Halderman is a professor at the University of Michigan. Dr. Halderman holds a PhD in computer science from Princeton

University. He received his undergraduate degree from Princeton University. A copy of his curriculum vitae is attached as Exhibit C. Dr. Halderman is expected to testify about voting machine infrastructure, with a focus on hacking vulnerabilities.

4. Dr. Michael Herron – Dr. Herron is a professor and chair of the Program in Quantitative Social Science at Dartmouth College. He holds a PhD in business political economics from Stanford University. He received his undergraduate degree from Carnegie Mellon University, an MS in statistics from Stanford University, and an MA in political science from the University of Dayton. A copy of his curriculum vitae is attached as Exhibit D. Dr. Herron is expected to testify on changes in Georgia’s precincts during recent elections, including in advance of the 2018 general election, and the use and effect of the “use it or lose it” statute, O.C.G.A. § 21-2-234.

5. Dr. Adrienne Jones – Dr. Jones is an assistant professor at Morehouse College. She holds a PhD in political science from the City University of New York Graduate Center. She received her undergraduate degree from Brown University, her JD from the University of California, Berkeley, and an MS from the City University of New York Graduate Center. A copy of her curriculum vitae is attached as Exhibit E. Dr. Jones is expected to testify, generally, about the history of voting and voter suppression throughout the country with an emphasis on suppression in the state of Georgia.

6. Dr. Kenneth Mayer – Dr. Mayer is a professor at the University of Wisconsin–Madison. He holds a PhD and an MA in political science from Yale University. He received his undergraduate degree from the University of California at San Diego. A copy of his curriculum vitae is attached as Exhibit F. Dr. Mayer is expected to testify on the impact of the “exact match” policy.

7. Dr. Peyton McCrary – Dr. McCrary is a professorial lecturer at the George Washington University of Law School. He holds a PhD in history from Princeton University. He received his undergraduate degree and an MA from the University of Virginia. He served as a historian for the U.S. Department of Justice, Civil Rights Division, Voting Section from 1990-2016. A copy of his curriculum vitae is attached as Exhibit G. Dr. McCrary is expected to testify on voting procedures proposed, adopted and implemented in Georgia that have placed discriminatory burdens on minority voters; the totality of the circumstances test in Section 2 of the Voting Rights Act; and factors identified by the U.S. Congress in amending Section 2 of the Voting Rights Act in 1982 as applicable to enforcing the totality of the circumstances test.

8. Dr. Lorraine Minnite – Dr. Minnite is an associate professor at Rutgers, The State University of New Jersey-Camden. Dr. Minnite holds a PhD in political science from the City University of New York Graduate Center. She received her undergraduate degree from Boston University and an MS from the City University

of New York Graduate Center. A copy of her curriculum vitae is attached as Exhibit H. Dr. Minnite is expected to testify about the incidence and frequency of voter fraud in Georgia and the impact, if any, of Defendants' policies and practices on voter fraud frequency.

9. Dr. Daniel Smith – Dr. Smith is a professor and chair of the Political Science Department at the University of Florida. He holds a PhD and an MA in political science from the University of Wisconsin–Madison. He received his undergraduate degree from Pennsylvania State University. A copy of his curriculum vitae is attached as Exhibit I. Dr. Smith is expected to testify on provisional and absentee ballot use in Georgia during recent elections, including the 2018 general election.

This the 15th day of July, 2019.

/s/Allegra J. Lawrence

Allegra J. Lawrence (GA Bar No. 439797)

Leslie J. Bryan (GA Bar No. 091175)

Maia Cogen (GA Bar No. 832438)

LAWRENCE & BUNDY LLC

1180 West Peachtree Street

Suite 1650

Atlanta, GA 30309

Telephone: (404) 400-3350

Fax: (404) 609-2504

allegra.lawrence-hardy@lawrencebundy.com

leslie.bryan@lawrencebundy.com

maia.cogen@lawrencebundy.com

Thomas R. Bundy (Admitted *pro hac vice*)

LAWRENCE & BUNDY LLC

8115 Maple Lawn Boulevard

Suite 350

Fulton, MD 20789

Telephone: 240-786-4998

Fax: (240) 786-4501

thomas.bundy@lawrencebundy.com

Dara Lindenbaum (Admitted *pro hac vice*)

**SANDLER REIFF LAMB ROSENSTEIN &
BIRKENSTOCK, P.C.**

1090 Vermont Avenue, NW

Suite 750

Washington, DC 20005

Telephone: (202) 479-1111

lindenbaum@sandlerreiff.com

Elizabeth Tanis (GA Bar No. 697415)

John Chandler (GA Bar No. 120600)

957 Springdale Road, NE

Atlanta, GA 30306

Telephone: (404) 771-2275

beth.tanis@gmail.com

jachandler@gmail.com

Kurt G. Kastorf (GA Bar No. 315315)

THE SUMMERVILLE FIRM, LLC

1226 Ponce de Leon Avenue, NE

Atlanta, GA 30306

Telephone: (770) 635-0030

kurt@summervillefirm.com

Matthew G. Kaiser (Admitted *pro hac vice*)

Sarah R. Fink (Admitted *pro hac vice*)

Scott S. Bernstein (Admitted *pro hac vice*)

KAISERDILLON PLLC

1099 Fourteenth Street, NW

Eighth Floor West

Washington, DC 20005

Telephone: (202) 640-2850

Fax: (202) 280-1034

mkaiser@kaiserdillon.com

sfink@kaiserdillon.com

sbernstein@kaiserdillon.com

Andrew D. Herman (Admitted *pro hac vice*)

Sarah Dowd (Admitted *pro hac vice*)

MILLER & CHEVALIER CHARTERED

900 Sixteenth Street, NW

Washington, DC 20006

Telephone: (202) 626-5800

Fax: (202) 626-5801

aherman@milchev.com

sdowd@milchev.com

Kali Bracey (Admitted *pro hac vice*)

JENNER & BLOCK LLP

1099 New York Avenue, NW

Suite 900

Washington, DC 20001

Telephone: (202) 639-6000

Fax: (202) 639-6066

kbracey@jenner.com

Jeremy H. Ershow (Admitted *pro hac vice*)

JENNER & BLOCK LLP

919 Third Avenue

New York, New York 10022

Telephone: (212) 891-1600

Fax: (212) 891-1699

jershow@jenner.com

Counsel for Fair Fight Action, Inc.; Care in Action, Inc.; Ebenezer Baptist Church of Atlanta, Georgia, Inc.; Baconton Missionary Baptist Church, Inc.; Virginia-Highland Church, Inc.; and The Sixth Episcopal District, Inc.

CERTIFICATE OF SERVICE

I hereby certify that on this the 15th day of July 2019, I caused to be electronically filed the foregoing Plaintiffs' Initial Expert Disclosures with the Clerk of Court using the CM/ECF system, which will automatically send notification of such filing upon Counsel of Record:

Chris Carr, Esq.

Attorney General

Dennis Dunn, Esq.

Deputy Attorney General

Russell Willard, Esq.

Senior Assistant Attorney General

Georgia Office of the Attorney General

40 Capitol Square

Atlanta, GA 30334

Email: ccarr@law.ga.gov

Email: ddunn@law.ga.gov

Email: rwillard@law.ga.gov

Joshua Barrett Belinfante, Esq.

Brian Edward Lake, Esq.

Carey Allen Miller, Esq.

Vincent Robert Russo, Jr., Esq.

Kimberly Anderson, Esq.

Robbins Ross Alloy Belinfante Littlefield, LLC -Atl

500 Fourteenth Street, NW

Atlanta, GA 30318

678-701-9381

Fax: 404-856-3250

Email: jbelinfante@robbinsfirm.com

Email: blake@robbinsfirm.com

Email: cmiller@robbinsfirm.com

Email: vrusso@robbinsfirm.com

Email: kanderson@robbinsfirm.com

Bryan P. Tyson, Esq.

Special Assistant Attorney General

Bryan Jacoutot, Esq.

Taylor English Duma LLP

1600 Parkwood Circle

Suite 200

Atlanta, GA 30339

Telephone: (678) 336-7249

Email: btyson@taylorenghish.com

Email: bjacoutot@taylorenghish.com

404-856-3260

Fax: 404-856-3250

/s/Allegra J. Lawrence

Allegra J. Lawrence

Georgia Bar No. 439797

DEFENDANTS' EX. 3

Turning Out to Vote: The Costs of Finding and Getting to the Polling Place

HENRY E. BRADY *University of California, Berkeley*
JOHN E. MCNULTY *Binghamton University*

Could changing the locations of polling places affect the outcome of an election by increasing the costs of voting for some and decreasing them for others? The consolidation of voting precincts in Los Angeles County during California's 2003 gubernatorial recall election provides a natural experiment for studying how changing polling places influences voter turnout. Overall turnout decreased by a substantial 1.85 percentage points: A drop in polling place turnout of 3.03 percentage points was partially offset by an increase in absentee voting of 1.18 percentage points. Both transportation and search costs caused these changes. Although there is no evidence that the Los Angeles Registrar of Voters changed more polling locations for those registered with one party than for those registered with another, the changing of polling places still had a small partisan effect because those registered as Democrats were more sensitive to changes in costs than those registered as Republicans. The effects were small enough to allay worries about significant electoral consequences in this instance (e.g., the partisan effect might be decisive in only about one in two hundred contested House elections), but large enough to make it possible for someone to affect outcomes by more extensive manipulation of polling place locations.

"Officials in two Houston-area elections recently manipulated polling locations to clear the path for their supporters to vote and to toss numerous roadblocks before their opponents."

—Joe Stinebaker, Associated Press,
Dallas Morning News, February 14, 2007

More than 50 years ago, Anthony Downs (1957) argued persuasively that voting incurs both costs and benefits, and when the costs get suf-

ficiently high, rational voters will abstain by not turning out to vote. Because costs may differ across groups, Downs' insight suggests that partisan politicians might be able to manipulate election dates, places, modes, and times to encourage voting by their supporters and to hinder voting by their opponents (Dunne, Reed, and Wilbanks 1997). One often changed feature of voting is the location of the polling place. Could something as simple, trifling, and apparently benign as changing polling place locations in Houston or elsewhere actually affect the number and kinds of people who vote by changing the equilibrium between the costs and benefits of voting?

In theory, even a tiny cost could lead to wholesale abstention (Niemi 1976; Sanders 1980), so low is the probability that one's single vote will affect the outcome of the election and be decisive in producing benefits for the voter. In practice, of course, people do vote, demonstrating that the act of participation is not only an exercise in self-interest, but also provides altruistic, civic-minded, and expressive benefits that overcome the personal costs in information gathering, time expended, distance traveled, and inconvenience incurred (Aldrich 1993; Blais 2000; Feddersen 2004; Feddersen and Pesendorfer 1996, 1999; Feddersen and Sandroni 2006; Goodin and Roberts 1975; Green and Shapiro 1994; Leighley and Nagler 1992; Palfrey and Rosen-thal 1995; Riker and Ordeshook 1973; Rosenstone and Hansen 1993; Uhlaner 1989; Verba, Scholzman, and Brady 1995; Wolfinger and Rosenstone 1980). However, these higher-minded motivations are not universally sufficient to overcome the costs of voting for all people. Although turnout rates are highly variable, they never approach 100% in any election of consequence. So, costs do matter for voter turnout, but how much?

The historic California 2003 gubernatorial recall election provided an opportunity to study how voting costs affect voter turnout. In what amounts to a natural

Henry E. Brady is Class of 1941 Monroe Deutsch Professor of Political Science and Public Policy, University of California, Berkeley, 210 Barrows Hall, Berkeley, CA 94720 (hbrady@berkeley.edu).

John E. McNulty is Assistant Professor of Political Science, Binghamton University, State University of New York, Binghamton, NY 13902 (jmcnulty@binghamton.edu).

This research was funded in large part by National Science Foundation grants SES-637220 and SES-0637226; additional funding was provided by Harpur College of Arts and Sciences at Binghamton University and by the Survey Research Center at the University of California, Berkeley. We are grateful to all for their support. Earlier versions of this article were presented at the 2004 Annual Meeting of the Midwest Political Science Association, the 2004 Annual Meeting of the Society for Political Methodology, the 2005 Annual Meeting of the Western Political Science Association, the 2005 Annual Meeting of the Midwest Political Science Association, the 2005 Association for Public Policy and Management Fall Conference, the 2006 Annual Meeting of the American Political Science Association, and the 2007 Annual Meeting of the Midwest Political Science Association. We thank the coeditors of the APSR, in particular Jeff Lewis, and also the journal's anonymous reviewers for invaluable input. We also thank Jasjeet Sekhon, Iris Hui, Ilona Einowski, Jon Stiles, Eva Seto, Lyn Civitello, Amy Kimball, Ricardo Gutierrez, Virginia Nee, Karin McDonald, Conor M. Dowling, Cynthia M. Van Maanen, Alexander Theodoridis, Craig Laramée, Robi Ragan, and Michael P. Welch, as well as BlitWise Productions LLC (www.blitwise.com), for critical advice and support on this article throughout its various incarnations. We are also grateful to Newton Chow and Cindy Partridge of the Los Angeles County Registrar-Recorder/County Clerk, and to Jim Hayes and Political Data, Inc. (www.politicaldata.com). All errors and omissions are the responsibility of the authors.



experiment, some counties—in order to cut administrative costs—consolidated voting precincts¹ and changed polling locations in ways that nearly randomly assigned increased voting costs to some voters but not others. Los Angeles County, the largest county in the United States, reduced the number of distinct voting precincts by 64% from 5,231 to 1,885, thus changing the location of the polling place for two thirds of the registered voters. We compare 2003 turnout of the “treatment” group, whose polling places changed from their location in 2002 to the 2003 turnout of the “control” group, whose polling place in 2003 remained the same as in 2002.

Although this change in polling places is not a perfect natural experiment, it is about as close as we can come with observational data. Furthermore, using statistical matching methods, we can create substantial similarity (or “balance”) between the treatment and control groups. Consequently, these data provide us with a strong inference that changing polling places in Los Angeles County reduced turnout by a substantial 1.85% among those who had their polling places changed. Voting at the polling place decreased even more, by 3.03%; however, an increase in absentee voting of 1.18% made up for some of this reduction. In addition, the substitution of absentee voting for polling place voting is greatest among older and middle-age people, whereas younger people are more inclined to simply not vote at all.

The change in polling places had two effects we expected: a transportation effect resulting from the change in distance to the polling place and a search effect resulting from the costs of finding and going to a new polling place. About 60% of the 3.03% reduction in turnout at the polling place is due to the search effect (of about 1.8%), and the impact of the search effect is about two and one-half times larger than the transportation effect for the average person who experienced an increased distance to the polling place of about one sixth of a mile. The two effects are roughly equal for someone who had an increased distance to the polling place of about a mile. The overall reduction in not voting of about 1.85% is almost entirely due to the search effect (about 1.4%) because the decision not to vote appears to be essentially unaffected by the distance to the polling place. People make a decision about voting or not voting based on the increased search costs from having their polling place moved, and if they decide to vote, they choose absentee or polling place voting based on both search and travel costs.

The change also had some partisan effects. There is no indication that the Los Angeles County Registrar of Voters manipulated polling locations so as to change more polling locations for those registered with one

rather than the other major party, but small partisan consequences are still observed for two reasons. First, there is a basic composition effect: because Los Angeles has more Democratic than Republican registrants, a constant reduction in turnout across the two party groups affects more Democrats than Republicans. Second, there is a slightly disparate impact between party registrants: Democrats reduce their voting by 2.11% compared to Republicans, who reduce their voting by only 1.61%. This changes the partisan margin by about 0.22%. Even though this is a very small figure, about one in two hundred contested House elections have a margin this size between first and second place.² Hence, changing polling place locations could conceivably affect an election, even if the registrar was not trying directly to manipulate polling places in a partisan manner. Moreover, substantial manipulation might be possible if someone changed polling places only in those places that leaned one way.

This is only one election, but the strength of the research design and the precision of the estimates of transportation costs, search costs, and overall impacts of consolidation from polling place changes represent a major advance over previous work that relied primarily on correlational and regression studies. These results also suggest that changing polling places can affect partisan outcomes, although the effects are small if the changes are essentially done randomly. But there is a potential for major impacts if systematic attempts are made to disrupt voting in precincts that all lean in one partisan direction.

PAST RESEARCH AND THEORY

Past Research. Our focus is on the costs of voting beyond registration.³ Using regression methods, Gimpel and Schuknecht (2003) investigated the impact of the difficulty of reaching one’s polling place using two measures: distance and impedance (i.e., the time and effort of the commute). In a 2000 general election study of three suburban Maryland counties, they showed that ease of access is positively related to turnout, although the relationship is nonlinear and moderated by other factors. Subsequently, Dyck and Gimpel (2005) and Gimpel, Dyck, and Shaw (2006) used regression methods to look at voters’ choices to vote in-person on Election Day, in-person early, or via absentee ballot,

¹ Consolidation was possible because the ballot for the recall election consisted of only four *statewide* questions, the two-part recall question and two initiatives. The first recall question was whether the sitting governor should be recalled, and the second was who, from a long list of candidates, should replace him. The only ballot difference across areas was the need to shuffle the order of candidates in each of 80 Assembly districts. Consequently, precinct consolidation was both feasible and a reasonable response to budgetary strictures.

² This number is estimated from Figure 1a of Mulligan and Hunter (2003), which is a histogram of the absolute percentage margin (absolute elected margin divided by the sum of Democratic and Republican votes). In Figure 1a, about 5% of elections have a 2% margin. A rough interpolation in Figure 1a suggests the figure in the text.

³ Lowering the costs of voting through easier registration, such as the 1993 National Voter Registration Act (commonly known as “Motor Voter”), or through absentee voting has a significant impact on turnout (Highton 1997, 2004; Knack 1995; Knack and White 2000; Rosenstone and Hansen 1993; Rosenstone and Wolfinger 1978; Squire, Wolfinger, and Glass 1987; Stein 1998; Timpone 1998; Wolfinger and Rosenstone 1980). These methods presumably decrease transportation and search costs associated with voting, which are considered in this article.

based on proximity to both Election Day and early voting polling places. This work also highlights the importance of geographic information systems (GIS) technology. This powerful new tool allows researchers to model spatial data, which can generate both key variables to test hypotheses and hypotheses for further study. It also produces illuminating displays. Haspel and Knotts (2005) use GIS to great effect in their study of Atlanta elections; they also engage in a valuable discussion of various conceptions of a distance variable. McNulty, Dowling, and Ariotti (2009) advance that discussion and demonstrate that the differences between roadmap and geometric distance reckoning are trivial; they argue that determining precise distances on a street grid does not improve accuracy sufficiently to justify the additional effort required (also see Haspel and Knotts 2005). For this article, we use straight-line distance calculations.

Theory. Changing polling places typically increases search and transportation costs.⁴ Our goal is to disentangle these costs by getting data on each of them. Changes in search costs can be measured by whether the polling place location was changed. Changes in transportation costs can be approximated by geocoding the original 2002 and the new 2003 polling place locations, and then calculating the change in distance between voters and their polling places.

Turnout, the fraction of people who vote either at the polling place or by absentee ballot, is an important outcome variable for this study, but it is only one of three possible outcome measures: voting at *polling places* (P), *absentee* voting (A), and *not voting* (N). Perhaps the most important policy question is the impact of changing polling places on *voter turnout* (V), which consists of voting at the polling place or via absentee ballot ($V = P + A$). The sum of either turning out (V) or not turning out (N) must equal the number of voters because one or the other act must occur. With this identity and the definition of turnout, any two of the measures P , A , and N provide a full description of electoral turnout.

In the 2002 Governor's race in Los Angeles County, 55.1% of those registered did not vote, about 35.8% voted at the polling place, and 9.1% voted absentee, indicating that there were many voters in all three groups. Following the change of polling places in 2003, polling place voting should decrease among those voters whose polls were moved because voters must bear the costs of searching for the new polling place and then (typically) incur the costs of greater travel distances to them. It also seems possible that there will be variation

in travel costs that depends not only on the increases in travel distances themselves, but also on the voter's initial distance to the polls. Those voters who are used to traveling greater distances to the polls might be less likely to experience an increase in distance as a substantial cost than those who are used to traveling short distances to the polls.

APPROACH TO THE EMPIRICAL ANALYSIS

The Data. We obtained voter lists, along with their addresses and precincts, for both the 2002 (gubernatorial and midterm election) and the 2003 recall election. We also obtained lists of polling place locations in 2002 and 2003. Matching and cleaning the files provided the bulk of the work. In the end, for all voters who appear on both the 2002 and 2003 voting lists, we have the location of their polling place for each year, whether they voted in 2002, and whether they voted in 2003. In addition, we have other information of varying quality about people's age, place of birth, and party registration. Appendix A describes the data matching project in more detail.

Our interest is in voters who were registered in Los Angeles County in 2002 and who were still on the registration rolls in 2003 at the same address. We also wanted voters for whom a legitimate vote disposition had been officially recorded of either voting at the polling place, voting absentee, or not voting. Our consolidated 2002 and 2003 file had 4,172,149 individuals, but only 3,142,523 were registered for both elections at the same address.⁵ We excluded 31,456 of these due to missing data.⁶ Our final file has 3,111,067 voters, which is 99.0% of our target population of those who were registered for both elections at the same address. We were able to geocode the addresses of 3,045,206 (97.9%) of these voters. One other major variable that we use is age, and we have a reasonable birth year for 2,844,031 (91.4%) voters in our final file.⁷ For the matching analysis that matches on turnout in 2002,

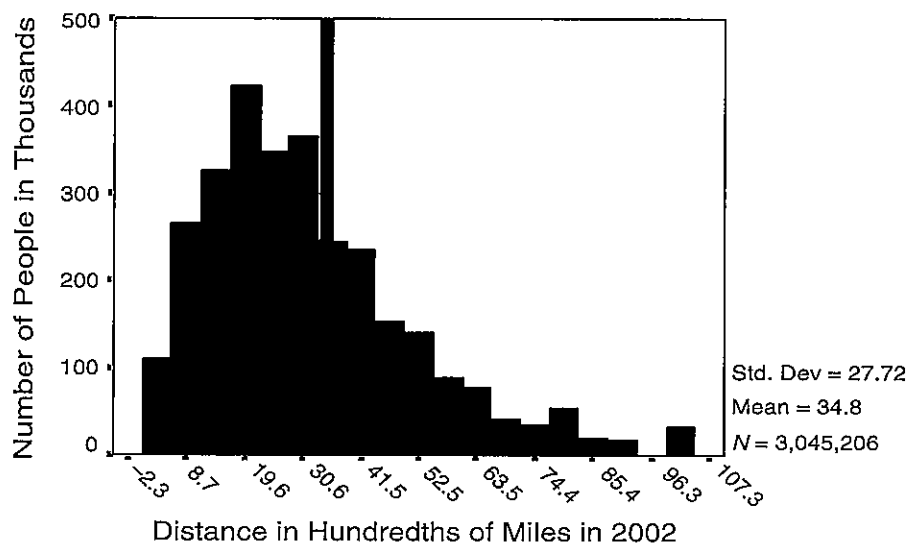
⁴ There are two kinds of *search costs*. One is the increased *informational costs* associated with finding the new polling place which we suspect are the major kind of costs. The other is that the new polling place will sometimes be in a different neighborhood than the old one, and this neighborhood may differ from it in many respects. On average, it seems just as likely that the new neighborhood will be better (more safe, easier to get around, more pleasant to be in, etc.) rather than worse than the old one, but uncertain and risk-averse voters will weigh the costs more heavily than the benefits. Hence, on average, there will be increased *risk aversion costs* due to the uncertainty surrounding any search.

⁵ Of the 4,172,149 people on our consolidated file, 289,300 were new registrants in 2003 who were not on the file in 2002, and 530,229 others dropped off between 2002 and 2003. After excluding these people, 3,352,620 remained who were registered in both years. We excluded 168,073 more people who had moved between 2002 and 2003 based on their addresses in our file. This left 3,184,547 people who were registered at the same address for both years. Of these, 42,024 did not have a legitimate vote disposition on the 2002 vote question and, based on their date of registration in the file, registered after the date of the 2002 election. This left us with our target population of 3,142,523 who were registered for both elections at the same address.

⁶ Of these in our target population, 5,630 did not have a legitimate vote disposition on the 2003 vote question and 25,826 people were in voting precincts for which we did not have any information about their polling place location in either 2002 or 2003.

⁷ Some birth years are recorded as in the 1700s or 1800s; these are obviously erroneous. Although there might be a small cohort of people aged 102 years or older in our file, we decided to exclude everyone with a birth year of 1900 and prior. An additional justification for this choice was that there were a large number of people—an order of magnitude larger than 1899 or 1901—with a recorded birth year of 1900, suggesting that 1900 was used as a default listing at some point.

FIGURE 1. Distance to Polling Place in 2002



distance to polling place in 2002, and age, we have a file of 2,781,895 people.

Changing Polling Places through Precinct Consolidation. The experimental treatment is a change in polling place produced by precinct consolidation which assigned many voters to new polling places. Those registrants who had the same polling places in both 2002 and 2003 are the control group. Those registrants who had different polling places in 2002 and 2003 are the treatment group. Because precinct consolidation was done throughout Los Angeles County to reduce administrative costs, those people whose polling places were changed were spread throughout the entire county, almost at random.

Not surprisingly, the 64% reduction in polling places⁸ in Los Angeles County between 2002 and 2003 increased the average distance that people had to travel to their polling places. Figures 1 and 2 present histograms for the distance that people traveled to their polling places in 2002 and 2003 among the 3,045,206 for whom we have geocoded addresses. Note that there is a clear shift to the right in 2003, with the average distance going from 0.348 miles to 0.502 miles—a mean increase of 0.154 miles, or 44.3%. In addition, the percentiles of the distribution shifted as shown in Table 1, and the median went from 0.28 to 0.41—a change of 0.13 miles,

TABLE 1. Average Distance to Polling Place in 2002 and 2003

| | Miles to Polling Place for Percentiles of Voters | | | | |
|----------------|--|------|------|------|------|
| | 10% | 25% | 50% | 75% | 90% |
| 2002 | 0.10 | 0.17 | 0.28 | 0.43 | 0.64 |
| 2003 | 0.14 | 0.25 | 0.41 | 0.63 | 0.90 |
| N = 3,045,206. | | | | | |

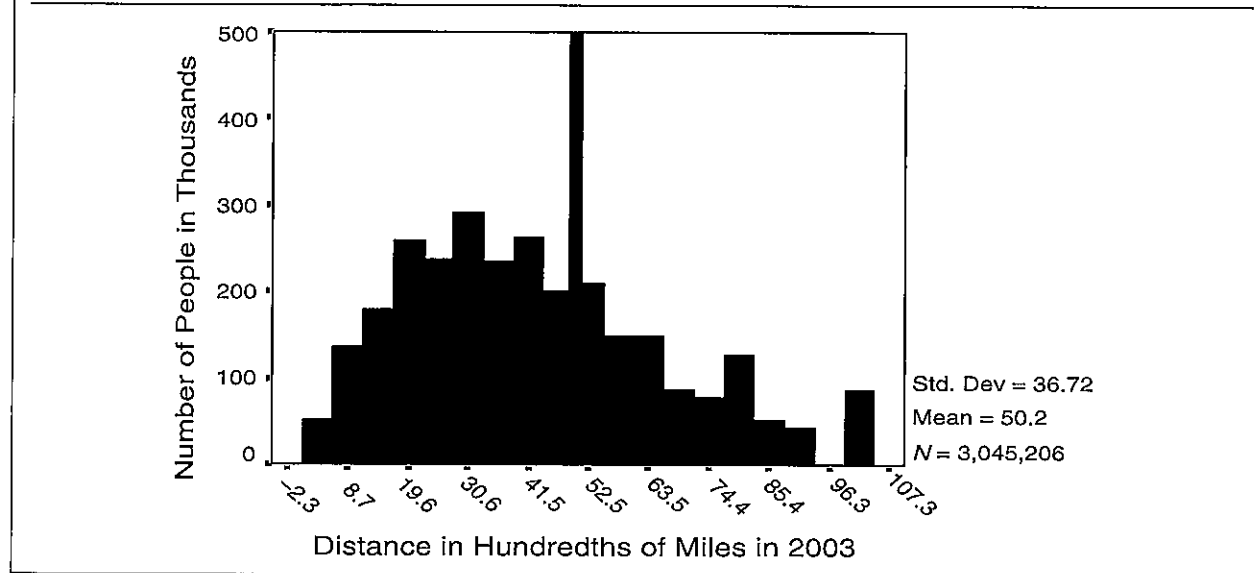
or about a 46% increase. In effect, the 25th percentile of voters in 2003 had to go about the same distance as the 50th percentile in 2002, and the 75th percentile in 2003 had to go about the same distance as the 90th percentile in 2002.

Were Polling Places Changed Randomly? If polling places were truly changed randomly in 2003, then the 2002 characteristics of the treatment and control groups should be statistically indistinguishable from one another. Specifically, the proportion of registered voters turning out at the polls, voting absentee, and not voting should be the same. Using an estimation technique that takes into account the fact that assignment to treatment or control occurred on the basis of 9,275 registration precincts (voting precincts are pieced together from these smaller registration precincts), we find tiny differences in turnout in 2002 on the order of one tenth to four tenths of a percentage point, and only one of the measures for turnout differences (for absentee voting) is statistically significant at even the 0.05 level.⁹ Although these turnout differences are

⁸ Virtually all the changes in polling places resulted from the countywide poll consolidation; however, a small number of polling places change every election due merely to routine turnover in polling place availability, or a current location may be found unsuitable or another preferable for reasons of accessibility (especially for the disabled), centrality, facilities, or cost. The consolidation stemming from the recall led to a much greater number of people with changed polling places than usual, and those people were spread comprehensively and more or less randomly throughout the entire county. As an additional bonus, there was a mere 11-month time span between major elections, which reduced typical turnover on the voter rolls and probably enhanced voter recall of the 2002 polling place.

⁹ The estimation method is hierarchical linear modeling (HLM) (Raudenbush and Bryk 2002), which takes into account the fact that

FIGURE 2. Distance to Polling Place in 2003



extremely small, they are large enough compared to the size of our ultimate results (which are on the order of one to three percentage points) to suggest that it might be worth correcting for them.

Moreover, there were other differences as well. Consider distance to the polling place in 2002. Those who had their polling place changed in 2003 had to go an average distance of 0.354 miles in 2002, whereas those who did not have their polling place changed had to go only 0.320 miles—a difference of 0.034 miles, which is highly statistically significant, although substantively rather small—about 60 yards. Even though it seems unlikely that initial differences in distance to the polling place are confounding our results, one of our theoretical goals is to learn about the impact of changes in polling place distance on voting, and based on our theoretical model (see Appendix B), this impact might depend on people's past experience with distance to their polling place. Consequently, there is a theoretical argument for controlling for initial (2002) polling place distance.

Another important determinant of voting is age, and we have a reasonable year of birth for about 91.4% of the voters on the file. We find very small preexisting differences between the two groups (treatment and control) by age, but there are about 0.73% more people older than 60 years in the group that did not have its polling place changed.

The Assignment Process. These results demonstrate that the consolidation process was very nearly but not perfectly random. So what principles were used for

the assignment of polling places? In the worst-case scenario, a highly partisan Registrar of Voters might change polling locations for precincts with large concentrations of partisans of one particular party, but this seems unlikely in California with its progressive tradition of choosing registrars based on their efficiency and effectiveness, not their partisan identification. It seems much more likely that a Registrar of Voters would change polling places to minimize the reduction in turnout that might be expected from such a change.¹⁰ To do this, the registrar would need some theory about what affects voting turnout and some relevant data on the precincts. The voter registration file would provide the most useful data, and the theories would presumably be fairly simple—such as believing that past voting behavior predicts future voting behavior, travel distance matters, and age affects voting behavior. This simplifies the modeling process because it suggests that we probably have at hand most of the information that was used by the registrar in changing polling places.

The registrar might consolidate precincts with greater fractions of absentee voters because changing

¹⁰ California notably has one of the most comprehensive voter information dispersal systems in the United States. They routinely send voter information booklets to all registrant households with their polling place included on the back cover and with an absentee ballot application enclosed. In addition, recognizing that changing polling places was likely to confuse registrants, the Registrar of Voters sent additional postcards to any household whose poll had been moved. The registrar also issued a number of press releases reporting on the large number of changes in polling places and encouraging concerned citizens to consider voting absentee given the expectation of extraordinary turnout. These measures probably reduced the costs associated with learning about changed polling places, but they surely did not eliminate them entirely, as our results illustrate. In fact, the implication is that in a polity with a less assiduous registrar or more lax voter information laws, the increase in the costs of voting would be even higher and the turnout falloff from changing polling places even greater.

groups of voters defined by registration precincts—a subgrouping of voting precincts—were assigned to either the treatment or control group. This method assigns the appropriate standard errors to variables that measure characteristics on the individual level or the precinct level. See Appendix C for details.

TABLE 2. Selection Regression for Assignment of Registration Precincts

| Variables | Basic Equation | t-Statistic | With Interaction | t-Statistic |
|---|-------------------|-------------|-----------------------|-------------|
| Constant | 0.583 (0.092) | 6.353 | 0.553 (0.093) | 5.945 |
| Size of precinct (people in 100s) | -0.012 (0.002) | -4.934 | -0.012 (0.002) | -4.976 |
| Absentee voting (fraction) | 0.348 (0.086) | 4.032 | 0.333 (0.087) | 3.848 |
| Distance to polling place in 2002 (thousandths of miles) | 0.017 (0.003) | 5.833 | 0.017 (0.003) | 5.815 |
| Age 60 or older (fraction) | -0.171 (0.052) | -3.269 | -0.042 (0.084) | -0.500 |
| Age 40 or older (fraction) | -0.029 (0.049) | -0.591 | -0.034 (0.049) | -0.684 |
| Polling place voting (fraction) | -0.010 (0.044) | -0.227 | 0.056 (0.055) | 1.016 |
| Democrats (fraction) | 0.117 (0.096) | 1.220 | 0.127 (0.096) | 1.319 |
| Republicans (fraction) | 0.091 (0.095) | 0.950 | 0.104 (0.096) | 1.089 |
| Independents (fraction) | 0.081 (0.107) | 0.749 | 0.089 (0.107) | 0.829 |
| Interaction: fraction older than age 60 and fraction polling place voting | — | — | -0.00338 (0.00171) | -1.973 |
| <i>R-squared</i> | 0.012 | | 0.013 | |
| <i>N</i> | 8,780 | | 8,780 | |

the polling place of absentee voters has little to no impact on their turnout.¹¹ The registrar might be less likely to consolidate precincts with more elderly voters, especially if they had large numbers of polling place voters. The registrar might be more likely to consolidate those precincts with fewer people than those with more people because fewer voters would be discomfited by changing their location. Finally, the decision to change a polling place might take into account 2002 distance to the polling place for the voters in a precinct. The registrar might try to reorganize polling places that are on average far away from voters in such a way as to minimize increases in distance. This presumably requires changing more of these polling places. These measures would tend to reduce public complaints about the process, something all service agencies seek to minimize, if not for the pleasure of performing their functions well, then merely due to self-interest.

Following the classic works by Heckman (1979) and Achen (1986), the registrar's assignment (or selection) process is modeled by regressing a binary variable for "treatment" or "control" on the covariates believed to be important for the selection process. Because the decision was made by registration precincts, we use these as the unit of analysis. Hence, those variables

related to individual characteristics or distance to the polling place are averages for those in the registration precinct.¹² To simplify the process of interpreting the regression, we present results from a linear regression (or a linear probability model without a Goldberger correction), although a logistic or probit regression yields exactly the same pattern.

Table 2 presents the results for two regressions of the treatment variable on the four factors that we believed would be important for assignment and some others that we believed would not be. First, the number of people in the registration precinct matters. Those precincts with more people are less likely to have their polling place changed. Thus, a relatively large registration precinct of 500 people (at the 75th percentile in size) is about 5% less likely to have its polling place changed than a small registration precinct of 100 people (at the 25th percentile). Second, a registration precinct

¹¹ Because absentee voters can drop off their ballots at polling places, there might be a slight impact.

¹² Almost all (95% of them with 95% of the people in them) registration precincts are entirely composed of people who either did not have their polling place changed or did have their polling place changed, but it was possible for individuals to be moved from one registration precinct to another between 2002 and 2003. Consequently, even though all members of a registration precinct are assigned the same polling place location, it is possible for a registration precinct for which almost everyone had their polling place changed to still have some people for which their polling place was not changed. The reverse is also possible. To accommodate these mixed precincts, we dichotomize the variable for the percentage of people who changed their polling place at one half.

with a relatively high level of absentee voting at 12% (at the 75th percentile) is about 2% more likely to have its polling place changed than a registration precinct with only 6% absentee (at the 25th percentile). Third, a registration precinct in which its voters have to go one quarter mile more to get to their polling place has a 4% greater chance of having its polling place changed. Fourth, a registration precinct that goes from 14% older than 60 years (the 25th percentile) to 24% older than 60 years (the 75th percentile) decreases its chances of having its polling place changed by almost 2%. However, the fraction of people ages 40 to 59 years; the fraction of polling place voters; and the fraction of Democrats, Republicans, or Independents do not affect the selection probability. The second column of regression coefficients adds another fact—it is not the percent of those older than 60 years that matters so much as its interaction with the percent who vote at the polling place.

Despite these findings, perhaps the most important feature of this regression is that it explains very little of the selection process—the R squared is only 0.012, meaning that only about 1.2% of the variance is explained. If the variables included in the regression are, in fact, the only ones that affected the assignment of polling places, then this small R squared indicates that the assignment was nearly random. Nevertheless, the regression suggests that some strategies were used to mitigate the adverse impacts of changed polling places so we should seek an approach that will allow us to correct for this modest but still possibly significant nonrandom assignment of precincts to control or treatment status.

STATISTICAL MATCHING RESULTS

We correct for nonrandom assignment using statistical matching (Imbens 2004; Morgan and Harding 2006; Rosenbaum 2002). Matching deals with the fundamental problem of causal inference, the fact that we can only observe each unit in either the treated or control condition, but not both, by taking each observed unit and matching it with one or more other similar observed units that received the opposite treatment. Thus, for a unit that received the treatment, we find a unit with similar characteristics that did not receive the treatment. We then use this unit as the imputed control for the treated unit. The trick, of course, is to match on the right characteristics, and this must be done to satisfy what is called the “conditional independence assumption” or the “unconfoundedness” assumption (Holland 1986; Neyman 1923; Rubin 1974). In our case, the obvious matching variables are those that are significant in our selection equation. The success of the matching can be evaluated by how well other variables that might be considered important are balanced in the matched data. That is, the extent to which we have similar distributions of these variables in the treatment and control cases.

Matching Variables. What should we choose as our matching variables? Should we match on all four significant factors (2002 turnout, age, size of precinct, and

distance to polling place in 2002) in our selection equation? Matching is only necessary for those variables that might be correlated with 2003 turnout. There are very strong reasons for expecting 2002 turnout behavior (Gerber, Green, and Shachar 2003) and age (Miller and Shanks 1996, chapter 3) to affect turnout so we match on it. The size of a precinct is another matter. A direct relationship between the number of registered voters in a precinct in which someone resides and those factors that have a causal impact on individual turnout seems very unlikely, so we do not match on size of precinct.¹³ It is not immediately obvious that 2002 distance to the polling place might affect 2003 turnout; however, in simple bivariate regressions, for each one tenth of a mile increase in distance to the polling place in 2002, polling place voting in 2002 *decreased* by about 0.27% and absentee voting in 2002 *increased* by about 0.25%. These results strongly suggest that 2002 distance to the polling place might have an impact on voting in 2003. Hence, even though there was very good initial balance in 2002 distance to the polling place, we nevertheless matched on this distance because it was statistically significant in our selection equation.

There are also other reasons for matching on 2002 distance to the polling place. Among those whose polling places were changed, the correlation between the *change in polling place distance* between 2002 and 2003 (presumably a measure of the strength of the “treatment”) and a person’s *polling place distance in 2002* is -0.293 , even though the correlation between having your polling place changed in 2003 and your polling place distance in 2002 is much smaller at 0.050. That is, whether your polling place was changed in 2003 did not have much to do with how far you had to go to your polling place in 2002, but once the decision was made to change your polling place, the change in distance was strongly (negatively) related to your 2002 polling place distance. It appears as if efforts were made to reduce the distance to polling places in 2003 for those who had appreciable distances to go in 2002.¹⁴

Consequently, another reason to match on 2002 distances to polling places is that even though the treatment and control groups were initially balanced with respect to this distance, the putative treatment

¹³ Although it seems unlikely that there is a *direct* relationship because the number of people in a precinct is typically indiscernible to voters, we do not dismiss the possibility that the number of voters in a precinct might *proxy* some characteristics of the area that might affect turnout such as population density or enduring neighborhood associations in long-established communities (Putnam 2000). However, we obtained very similar results to the ones reported here when we added matches for geographic location (using ZIP codes), a good proxy for density and many other contextual characteristics.

¹⁴ The average change in distance between 2002 and 2003 can be computed for a 7-point 2002 polling place distance scale. Among those whose polling places were changed, those in category one (one tenth of a mile from the polling place in 2002) had their distance to their polling place increased by almost half a mile (0.4788). These distances decrease category by category until they actually become negative for the last category: 0.3647, 0.2805, 0.2070, 0.1383, 0.0676, -0.0915 . Thus, those people who had the longest distances to go to their polling place in 2002 and who had their polling place changed in 2003 had their average distance decreased by about one tenth of a mile.

TABLE 3. Changes in Balance Due to Matching (Treatment Minus Control)

| | Initial Difference | Difference after Matching | Net Result |
|---------------------------|--------------------|---------------------------|------------|
| Permanent Absentee | -0.155% | -0.034% | Smaller |
| Party Registration | | | |
| Democrat | -0.156% | -0.569% | Larger |
| Republican | -0.055% | 0.364% | Larger |
| Third party | 0.109% | 0.082% | Smaller |
| Decline to state | 0.101% | 0.122% | Larger |
| Place of Birth | | | |
| California | -0.399% | -0.221% | Smaller |
| West (not California) | 0.114% | 0.027% | Smaller |
| East of Mississippi | 0.003 | 0.039% | Larger |
| Born in United States | 0.005% | 0.001% | Smaller |
| Foreign born | 0.277% | 0.232% | Smaller |

strengths (i.e., the changes in distance to the polling place between 2002 and 2003) differed by this distance. If we want to determine the impact of different treatment strengths, then we must match on 2002 distance to the polling place. Moreover, there is still another reason for considering 2002 distance to polling place. Perhaps distance to polling place in 2002 interacts with the treatment to make it more or less efficacious. Thus, even if distance to polling place in 2002 were unrelated to turnout in 2003, failing to control for it would lead to a missed opportunity—we would not learn whether there is an interaction between this variable and the effects of the treatment.¹⁵

To facilitate matching cases with respect to people's turnout behavior in 2002, their age, and their distance to the polling place in 2002, we put each variable into categories. Past turnout is in three categories (voted at polling place, voted absentee, or did not vote). We combined some age groups (starting with those 61 years or older) to get 53 relatively equal-size categories with an average size of 52,486.¹⁶ We created 74 categories for distance to the polling place in 2002, with the number of cases in each category ranging from 12,743 to 66,800. In most cases, an exact match required that the matched observation have a distance within plus or minus 0.01 miles.¹⁷ There were 11,766 potential matching categories ($3 \times 53 \times 74$), and there were 2,781,895 observations with data on all three variables.

All but 14 of these categories had both treatment and control observations, which reduced the number of observations by 133 to 2,781,762 observations. In the results reported here, we matched using a modification of Sekhon's "matching" package for *R* (Mebane and Sekhon 1998; Sekhon n.d.). To generate average treatment effects, observations were paired with all exact matches across "experimental" conditions to produce 513,934,138 matched pairs. The modified program produced standard errors, which took into account the fact that "randomization" was across registration precincts and not individuals.

Matching Balance. Before presenting the results, it is useful to consider the degree to which the data are "balanced" on other important variables that might be associated with turnout. The matching ensures that the data are balanced with respect to turnout in 2002, age, and distance to polling place in 2002, but does it also create balance on other variables? We consider three variables that were reasonably complete on the voting files: permanent absentee status, party registration, and place of birth. About 4.4% of the sample had chosen to use absentee ballots "permanently," and 71.5% of them actually voted absentee in 2002, whereas 10.2% of them voted at their polling place. About 52% registered as Democrats, 28% as Republicans, 16% as "decline to state," and 5% with other parties. We coded birthplaces into five categories: California (41%), East of the Mississippi River (19%), West of the Mississippi River but not California (10%), foreign born (29%), and United States born (1.2%).

Table 3 presents the balance results. We present both initial differences (treatment minus control) in percentages and the final differences after matching. The *initial* differences in party registration show that there was no (successful) effort to change polling places so as to affect the partisans of one party more than another. There was a tiny bit more of both Democrats and Republicans in the control than in the treatment group, but the net difference was 0.101%, or only about 1,800 voters. Of these only, about two thirds had their polling place changed, and at most, only about 2% did not vote—for a puny impact of about 24 voters lost for

¹⁵ In medicine, for example, if some genetic characteristic has nothing to do with getting a disease, but it interacts with some medicine for curing the disease, then failing to consider this genetic characteristic in a medical trial will ultimately lead to mistakes in treatment regimens. Doctors will not know, for example, that for people with genetic characteristic "X" the medicine has no impact, whereas it is efficacious for people with genetic characteristic "Y".

¹⁶ The grouped categories are 18–20, 61–62, 63–64, 65–66, 67–68, 69–70, 71–73, 74–76, 77–79, 80–83, 84–89, and 90–100. All people older than 100 years were excluded from the file. The number of people in the categories ranged from 37,664 (those in the 74–76 category) to 66,421 (46 year olds).

¹⁷ The first 60 categories are each one hundredth of a mile. From 0.6 to 0.7 of a mile, there are five equal categories of two hundredths of a mile. From 0.7 to 0.9 of a mile, there are five equal categories of four hundredths of a mile. The final four categories are (0.9–1.0), (1.0–1.2), (1.2–1.6), and (1.6–80).

TABLE 4. Outcome Estimates: Unadjusted and Matched

| | Unadjusted Results | Matching Results | Naive <i>t</i> Statistic | Sophisticated <i>t</i> Statistic |
|----------------------|--------------------|------------------|--------------------------|----------------------------------|
| Polling place voting | −3.11% | −3.03% | −83.12 | −51.16 |
| Absentee voting | 1.56% | 1.18% | 49.13 | 32.83 |
| Not voting | 1.55% | 1.85% | 52.08 | 26.22 |
| Number of people | 2,781,762 | 2,781,762 | | |

the Democrats or a minuscule 0.001% of total partisan voters.

For the rest of the results, it does not make a great deal of sense to present *t*-statistics because the large sample ensures that most of these differences are statistically significant. Rather, we focus on their size. Of the 10 differences, 6 of them are smaller after matching, 1 is about the same (for “decline to state”), and 3 are bigger (for “born in the East,” Democrat, and Republican). The two largest differences in absolute value are for Democrats (0.57%) and Republicans (−0.36%), but most are much smaller. The partisan difference might be considered a problem, but what seems to matter for turnout is major party membership versus “decline to state” or third-party membership. Those registered with the two major parties turned out at rates of 65.5% in 2002 in Los Angeles (Republicans) and 59.3% (Democrats), whereas those not registered with the major parties turned out at 47.2% (decline to state) and 46.3% (third parties)—so partisans of the major parties voted at rates that were about 15 percentage points higher than others. Thus, the important figure is the net reduction in partisans in the treatment group due to the imbalance. This figure is about 0.20%, which is the population-weighted difference of the weighted average of −0.569 and 0.364 and the weighted average of 0.082 and 0.122. Thus, we would expect that the treatment group would have lower turnout of about $0.15 \times 0.20\% = 0.03\%$, which is only about one thirtieth of the smallest effect sizes of about 1.00% that we find.

Matching Results. Table 4 presents the results for the three 2003 turnout variables after matching on turnout in 2002, distance to polling place in 2002, and age. The first column reports the raw results without matching. The second column reports results from matching. The decline of 3.03% in polling place voting is similar to the unadjusted results, but nonvoting appears to be much higher at 1.85% and absentee voting much lower at 1.18%.¹⁸ These results most likely reflect the mitigating efforts taken by the Registrar of Voters. The matching results for nonvoting can be thought of as what would have occurred had the registrar not exerted any efforts

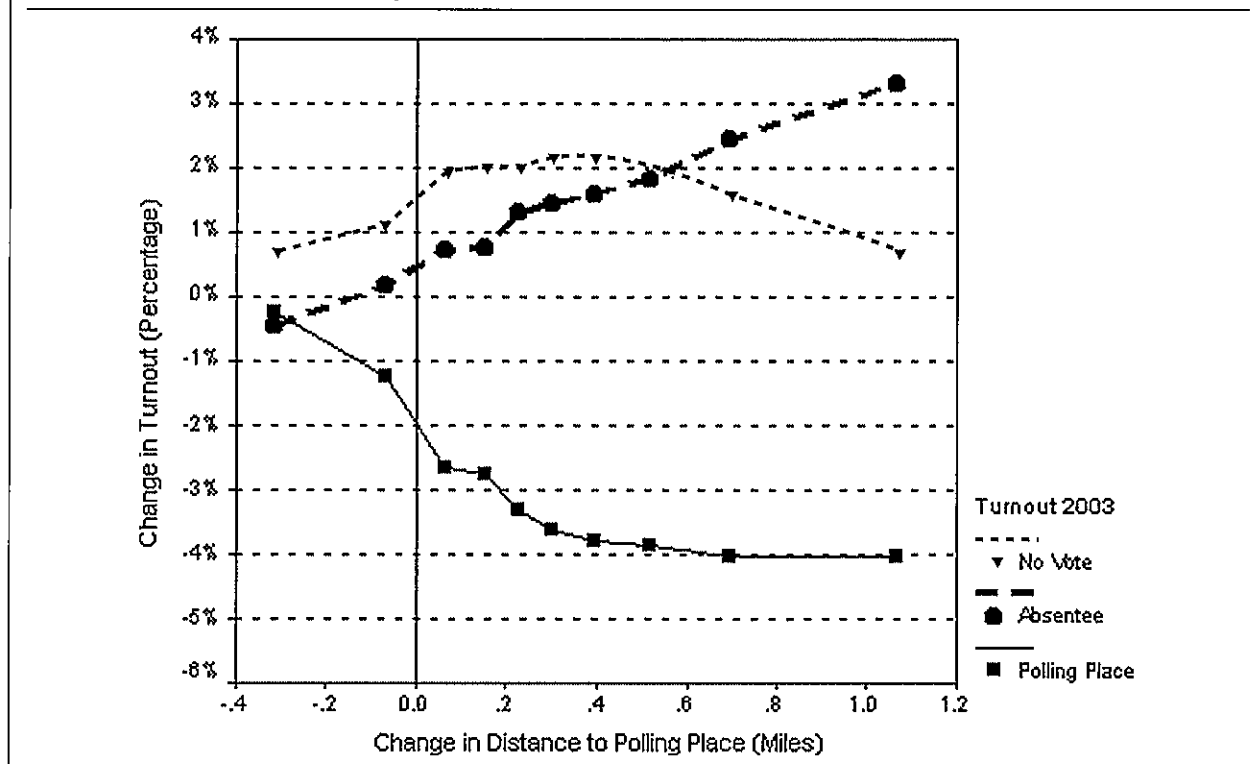
to mitigate the impact of changing polling places, and the raw results can be considered the smaller decline in nonvoting that actually occurred. The relatively small difference in nonvoting between the unadjusted and matching results—only 0.379 percentage points—suggests the difficulty of overcoming the problems of consolidating precincts. The third and fourth columns present two estimates of *t* statistics. The third column presents the *t* statistics computed by ignoring the fact that blocs of voters in registration precincts were assigned to the “treatment” or “control” condition en masse. The fourth column presents *t* statistics computed by making an adjustment to the matching estimator to simulate the HLM method used previously in this article. These *t* statistics are somewhat smaller in absolute value than those in the third column, but they are still exceptionally large.¹⁹

Impact of Changes in Distance to Polling Place.

We can use matching methods to disentangle search and transportation effects by plotting the difference in turnout between those who had their polling place moved and those who did not by the various amounts of change in distance to the polling place between 2002 and 2003. Figure 3 presents polling place turnout, absentee turnout, and nonvoting estimated over a range of possible changes in distance to the polling place. The data for Figure 3 were obtained by sorting the treatment group into 10 approximately equal-size groups (ranging from 99,753 to 267,793 people), depending on the change in their distance to their polling place between 2002 and 2003. Each group was assigned the median value of the change in polling place distance for those in the group (thus yielding values of −0.3181, −0.0714, 0.0624, 0.1552, 0.2253, 0.3034, 0.3959, 0.5175, 0.6974, and 1.0644 miles). We can think of these as different “doses” of the change in distance to polling place treatment. For each dose level, we match the treatment and control groups by 2002 turnout, 2002 distance to the polling place, and age. Within each dose level, we compared turnout for those in the treatment group who got that dose (for a given set of matching characteristics) with all those in the control group with those matching characteristics. These estimates

¹⁸ We also did this analysis with party as an added matching variable (with “decline to state” combined with “third party” to produce three categories: Democrat, Republican, All Other). As expected given the small differences in the balance results, the point estimates were almost identical: 3.039% for polling place voting, 1.847% for nonvoting, and 1.192% for absentee voting—differences of at most 0.013%—about one hundredth of a percent. We get similar results when matching by ZIP code, age, distance to polling place in 2002, and turnout in 2002.

¹⁹ Calculating these *t* statistics required reprogramming Sekhon’s matching program to estimate standard errors within and between registration precincts in much the same way as the HLM algorithm accounts for both kinds of error. Our thanks go to Alex Theodoridis for the programming and to Jasjeet Sekhon for advice. In making our modifications to Sekhon’s program, we consulted Abadie et al. (2001) and Abadie and Imbens (2006).

FIGURE 3. Search and Transportation Effects

of the effect for each dose are then added up across the matching groups to obtain the average treatment effect for the dose. The standard errors for the points on these lines are approximately 0.18% so that a 95% confidence interval would be the estimates plus or minus approximately 0.36%. Note that the veracity of the estimates depends on the assumption that the doses are essentially randomly assigned conditional on the matching characteristics. This assumption seems more likely to be true because we matched on initial distance to the polling place in 2002 to deal with the fact that the amount of change possible is obviously correlated with the “room for change” given the initial distance to the polling place.

As we would expect, voting at the polling place (the solid line) decreases with an increasing value for the change in distance to the polling place. Moreover, when the change in distance is zero, we can estimate the pure search effect of about -1.8% , and the slope of the line, about -0.50% per one tenth of a mile for the part of the curve between -0.40 and 0.40 miles and almost zero thereafter, indicates the transportation effect. Part of this reduction in turnout was alleviated by an increase in absentee voting (the dashed line), with the pure information effect of 0.50% and the transportation effect of about 0.25% throughout the range. Thus, just by having a polling place changed, polling place voting decreases by 1.8% , and 0.5% is replaced with absentee voting for a net decrease in voting of 1.3% (see the dotted “no vote” line). For each one tenth of a mile increase in distance up to 0.4 of a mile, polling place voting decreases by 0.50% , and

about half of this (0.25%) is supplanted by absentee voting for a net reduction of 0.25% per one tenth of a mile up to 0.40 of a mile. Beyond four tenths of a mile, increased absentee voting actually decreases the amount of nonvoting to perhaps 1% . Figure 3 shows that both search and transportation effects matter.

It also seems likely that the impact of changing polling places in 2003 varies by turnout behavior in 2002, a voter’s age, and distance to the polling place in 2002. We consider each of these in turn. Figure 4 shows the impact on polling place voting in 2003 by type of turnout in 2002. The biggest declines in polling place turnout in 2003 are for those who voted at their polling place in 2002 (see the solid line). There is also a substantial impact on absentee voters (see the dashed line), and, as we might expect, very little impact on those who did not vote in 2002. Moving on to the impacts of age, Figure 5 shows that older voters reduce their polling place voting much more than younger voters (see the solid line), but they also substitute absentee voting (the dashed line) at a much higher rate. The net result is similar rates of increased nonvoting (the dotted line) across all age groups.²⁰

²⁰ This figure was constructed by aggregating age categories to (18–24), (25–29), (30–34), (35–39), (40–44), (45–49), (50–54), (55–59), (60–64), (65–69), (70–79), and (80–99). The standard errors for the turnout measures are approximately 0.25% so that a 95% confidence interval would be $\pm 0.50\%$. Thus, the lines for polling place and absentee voting are statistically indistinguishable from monotonically decreasing and increasing ones, respectively. And the line for nonvoting is indistinguishable from a flat line.

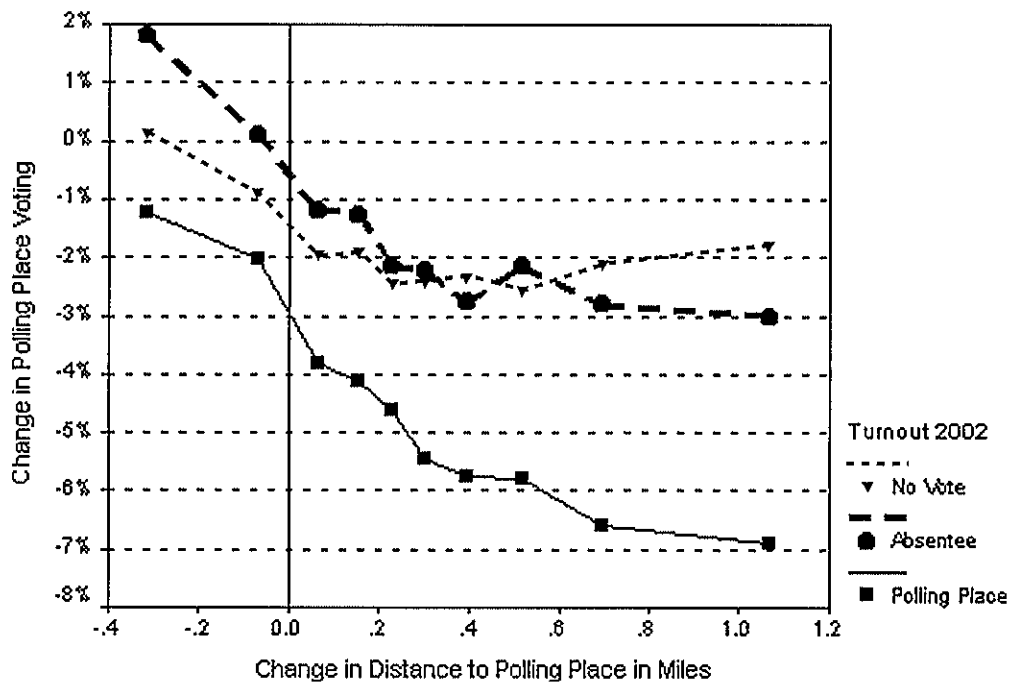
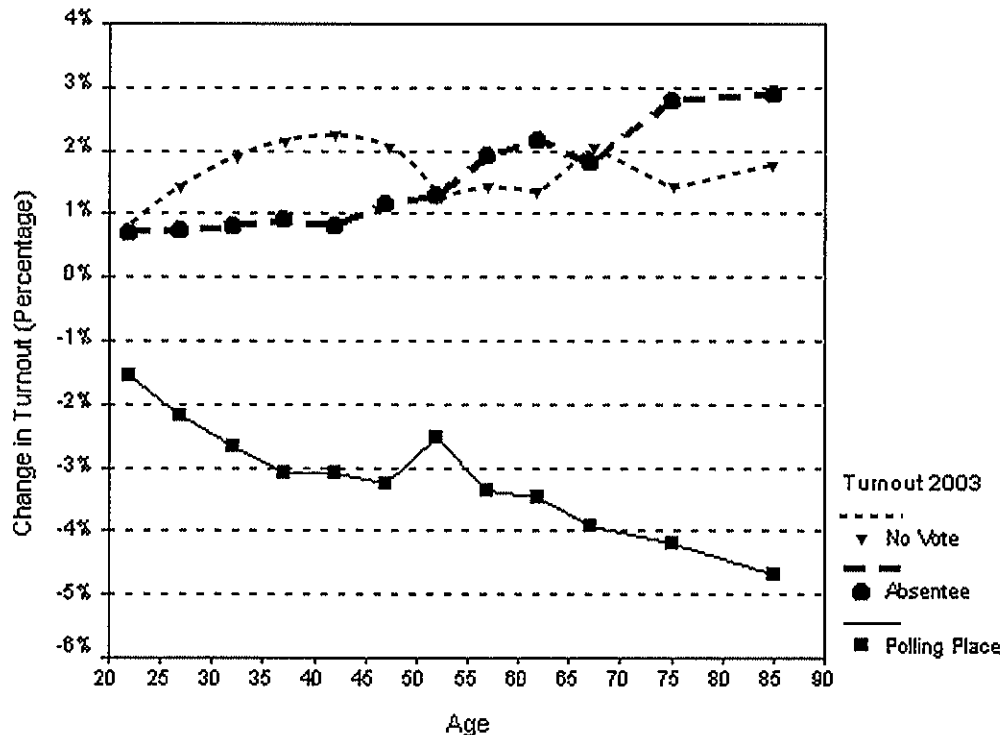
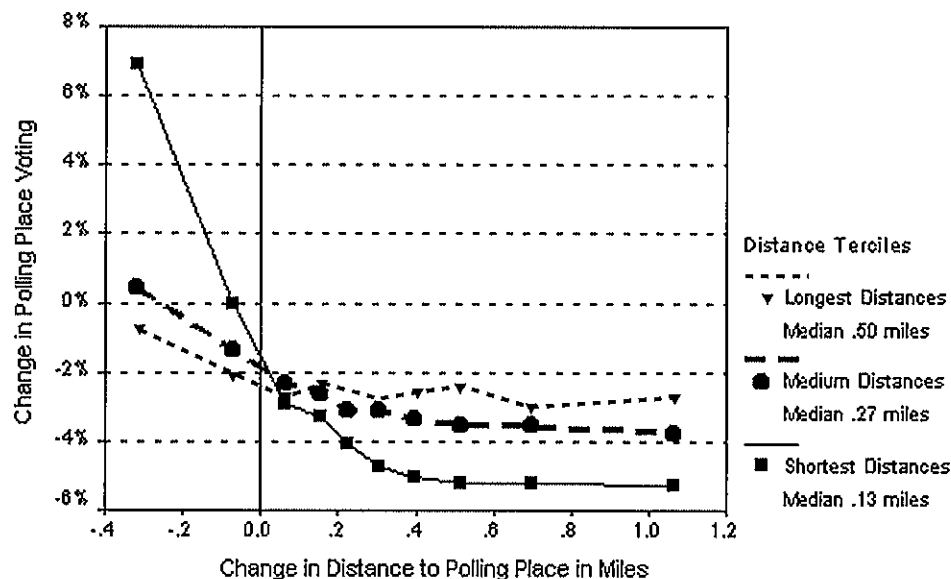
FIGURE 4. Change in Polling Place Voting in 2003 by Change in Polling Place Distance by Turnout in 2002**FIGURE 5. Change in Turnout in 2003 by Age**

FIGURE 6. Change in Polling Place Voting in 2003 by Change in Polling Place Distance in 2003 by 2002 Distance to Polling Place in Terciles

Finally, consider how initial distance to the polling place in 2002 affects the relationship between turnout and the change in polling place distance between 2002 and 2003. Figure 6 plots *polling place turnout* by change in distance to polling place for three different initial distances to the polling place in 2002. The solid line is for initial distances of zero to 0.2 of a mile (about 33% of the sample with a median of 0.13 mile), the dashed line is for distances of 0.21 to 0.37 miles (about 35% of the sample with a median of 0.27 mile), and the dotted line is for distances of 0.38 to several miles (about 33% of the sample with a median of 0.50). There is a clear impact with the greatest effects (i.e., the steepest lines) for the shortest initial distances in 2002.

Common sense suggests that *nonvoting* should also be affected by changes in distance to the polling place. It seems reasonable that people who voted at their polling place in the past and who find absentee voting onerous will simply decide not to vote when confronted with a polling place that is much farther away in 2003. Yet, Figure 3 suggests that there is, at best, only a slight relationship between nonvoting and distance to the polling place, and Figure 7 shows that there is even less evidence for an impact of an increase on distance to the polling place on nonvoting after controlling for initial (2002) distance to the polling place. There appears to be no relationship between nonvoting and change in distance to the polling place regardless of the initial distance. Statistical estimates in Appendix B confirm this result.

Summary of Results. People appear to make decisions in a two-step, “boundedly rational” (Conlisk 1996) process. They initially decide whether to vote based on just the increased search costs imposed by changed polling places. Then, once they have decided to vote, they decide whether to vote at the polling place

or absentee by also considering changed distances (see Appendix B for more discussion of this process.)

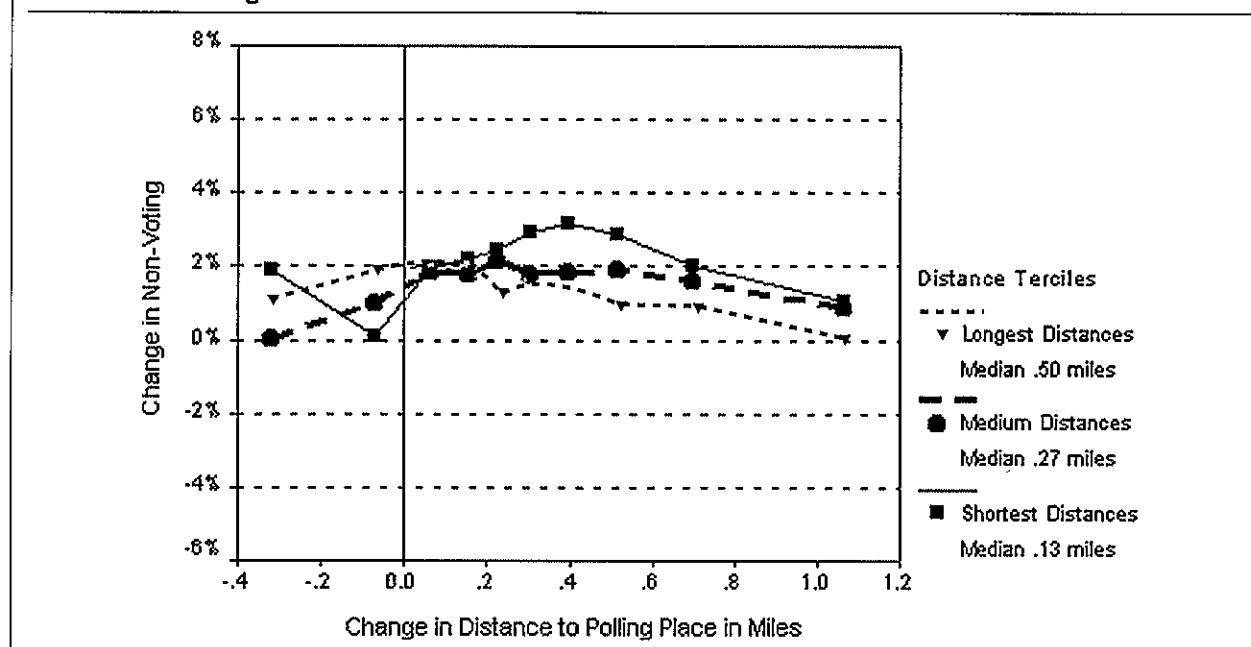
These results demonstrate the importance of convenience, habituation, and learning for voting. Changes in polling places and increased distances to polling places change turnout behavior due to increased inconvenience. Because they are most discomfited by changes, older voters and voters used to voting at their polling places reduce their polling place voting the most when their polling place is changed. But those people who are habituated to going long distances to their polling place are less affected by increased distances to polling places, and older people (whom we can presume have learned about the voting system) substitute absentee voting for polling place voting.

These results lead us back to the question with which we began: how does distance matter? Certainly, a *change* in polling place distance matters because our analysis passes the tests for a reliable causal inference: a change of polling places occurred for some people in Los Angeles (i.e., there was a manipulation of the putative cause); we had a real control group; we did our best to control for confounders; and we found significant effects. But what does it mean, for example, that the size of this change is conditioned on polling place distance in 2002? What does polling place distance in 2002 actually measure? Does it stand for some unobserved heterogeneity that is not captured by our matching variables? What could cause this heterogeneity? Is it correct to say that some people are generally more used to long trips than others so that they are less affected by changes in their polling place location? Or is something else going on? These are questions for future research.

Partisan Impacts. Increasing costs certainly affect turnout, but do they have partisan implications as well?

TABLE 5. Estimation of Increase in Nonvoters Due to Changes in Polling Place by Party Registration and 2002 Vote

| Party Registration | 2002 Turnout | No. of People | Percentage of Category | Rate of Nonvoting | No. of Nonvoters |
|---------------------|--------------|------------------|------------------------|-------------------|------------------|
| Democrats (51.7%) | PP | 614,480 | 42.7% | 2.88% | 17,697 |
| | AV | 138,651 | 9.6% | 0.59% | 818 |
| | NV | 685,800 | 47.7% | 1.73% | 11,864 |
| | Total | 1,438,931 | 100% | 2.11% | 30,379 |
| Republicans (27.6%) | PP | 334,521 | 43.6% | 1.90% | 6,356 |
| | AV | 91,749 | 11.9% | 0.76% | 697 |
| | NV | 341,561 | 44.5% | 1.56% | 5,328 |
| | Total | 767,831 | 100% | 1.61% | 12,381 |
| Neither (20.7%) | PP | 181,078 | 31.4% | 2.61% | 4,726 |
| | AV | 36,236 | 6.3% | 0.41% | 149 |
| | NV | 358,819 | 62.3% | 1.60% | 5,741 |
| | Total | 576,133 | 100% | 1.79% | 10,616 |

FIGURE 7. Change in Non-Voting in 2003 by Change in Polling Place Distance in 2003 by 2002 Distance to Polling Place in Terciles

In Table 5, we estimate the increase in the nonvoting rate from the changing of polling places separately by party registration (Democratic, Republican, and Neither) and polling place in 2002. The rates are estimated after matching on age and 2002 distance to the polling place. We find that the increase in nonvoting rates for Democrats is higher than for Republicans for those who voted at the polling place (PP) in 2002 (2.88% to 1.90%) and for those who did not vote (NV) in 2002 (1.73% and 1.56%). These two groups account for 90.4% of the Democrats and 88.1% of the Republicans. Hence, even though the increase in nonvoting rate is slightly higher for Republicans who voted absentee in 2002 than for Democrats who voted in absentee in 2002

(0.76% compared to 0.59%), the overall increase in nonvoting rate is higher among the Democrats (2.11%) than among the Republicans (1.61%).

We can convert these nonvoting rates into the number of voters who did not turn out. The sixth (and last) column of each of the three party registration categories estimates the number of nonvoters by applying the rate of nonvoting (in the fifth column) to the number of voters in that group (the third column) to get the number of nonvoters. This gives 30,379 for the Democrats and 12,381 for the Republicans, for a difference of 17,998. This difference is actually too high because it assumes that the changing of voting places affected everybody when, in fact, it only affects

about two thirds of the population; thus, a reasonable estimate of the ceiling of potential Democratic votes lost is 12,000, which assumes that voters reliably vote for the party in which they are registered.²¹

This can be broken into two pieces. Because Los Angeles has more Democratic registration than Republican, a constant reduction in turnout across the two party groups of 1.94% (the weighted average of 2.11% and 1.61%) affects more Democrats than Republicans—about 8,700 more. This reduction does not affect the relative ratio of Democrats to Republicans within Los Angeles County, but it does mean that fewer Democrats voted in Los Angeles County than if there had been no changes in polling places. If in California only Los Angeles disrupted its voters in this way, then Democrats would be less represented than if no disruptions had taken place. Second, because Democrats reduce their voting by 2.11% compared to Republicans, who reduce their voting by only 1.61%, the net loss to Democrats is another 3,300 votes. This changes the partisan margin by about 0.22%. This is a very small figure, but about one in two hundred contested House elections have a margin this size.²² Hence, changing polling place locations could affect an election, even when the registrar was trying mightily not to manipulate polling places in a partisan manner. Moreover, substantial manipulation might be possible if there were intent to do so by changing polling places only in those places that leaned one way.

CONCLUSION

Although the 2003 changes in polling places is not a perfect natural experiment, it is about as close as we come with observational data. Consequently, it provides us with a strong inference that the changes in Los Angeles County reduced turnout by a substantial 1.85% in the precincts where the polling location was changed. We also find that voting at the polling place decreases even more, by 3.03%, but that an absentee voting increase of 1.18% makes up for some of this reduction. In addition, we find that the substitution of absentee voting for a reduction in polling place voting is greatest among people of middle age and older, whereas younger people are more inclined to simply not vote at all.

Change in polling place location had the two effects we expected: a transportation effect resulting from the change in distance to the polling place and a search effect resulting from the costs of finding and going to a new polling place. About 60% of the 3.03% reduction in turnout at the polling place is due to the search effect (of about 1.80%), and the impact of the search effect is about two and one-half times larger than the transportation effect for the average person who ex-

perienced an increased distance to the polling place of about one sixth of a mile. The two effects were roughly equal for someone who had an increased distance to the polling place of about a mile. The overall reduction in not voting of about 1.85% is almost entirely due to the search effect (about 1.4%) because the decision not to vote appears to be essentially unaffected by the distance to the polling place. People make a decision about whether to vote based on the increased search costs from having their polling place moved, and if they decide to vote, they choose absentee or polling place voting based on both search and travel costs. This result implies that for those advocating larger, more economical precincts, if absentee ballots are as easy to come by as in California's "no excuse needed" system, then it seems that the increased travel costs will not seriously deter voting, although switching to a new system may impose substantial search costs that will at least temporarily reduce overall turnout. Finally, partisan effects are small enough that they can probably be ignored when polling places are essentially changed randomly, as in Los Angeles, but they are large enough that they could be used by an unscrupulous politician or registrar to manipulate an election.

APPENDIX A: MATCHING AND CLEANING OF DATA SETS

The data acquired for this article came from the Los Angeles County Registrar-Recorder/County Clerk. The voter data were obtained routinely; the polling place data less so. Individual-level voter data include the voter's name, registration precinct, residential address, mailing address, phone, party registration, sex, birthdate, birthplace, date of registration, date of last transaction, permanent absentee voter status, and turnout records (in-person voting, absentee voting, or abstention), along with several fields of identifying information and other miscellaneous data. Some of these data are incomplete. For example, dates and places of birth are missing in many cases, and sex is missing more often than not, although it can sometimes be inferred from the title field (Mr., Mrs., Miss). Still other pieces of data are obviously incorrect, such as an improbably large cohort of people born in 1900, as well as even "older" people born in the eighteenth and nineteenth centuries. We made a decision to code any birthdate prior to the year 1901 as missing. However, the critical data of precinct and turnout are always present.

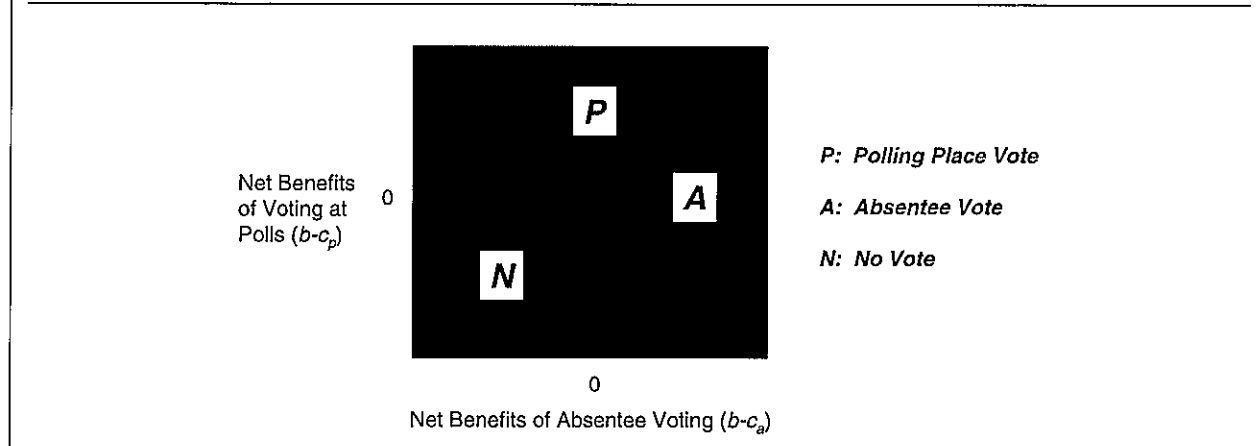
Typically, the registrar maintains official records of past polling places in hard copy only. These records include polling place precincts, addresses, and descriptions (residence, business, church, school, etc.). Although data from 2003 turned out to be available electronically via a stroke of luck, data from 2002 had to be scanned in using optical character recognition software, and then reviewed line by line for correctness. We are grateful for the assistance of several colleagues at UC DATA and the Survey Research Center in executing this technically challenging and labor-intensive task, including Iris Hui, Ilona Einowski, Jon Stiles, Eva Seto, Lyn Civitello, Amy Kimball, Ricardo Gutierrez, Virginia Nee, and Alexander Theodoridis. We are also grateful to Conor M. Dowling and Cynthia M. Van Maanen at Binghamton University.

We then had to match each voter to their polling place for both 2002 and 2003. This was a challenge because the precincts reported for the voters were at a different level of aggregation than those reported for the polling place. Voters

²¹ This is the most conservative assumption, and we do know that party identification is strongly related to voting. Moreover, our concern here is with what might have occurred in a typical election that would have been much more partisan than the California Recall.

²² As noted previously, this number is estimated from Figure 1a of Mulligan and Hunter (2003).

FIGURE B1. Voter Decision Making



were associated with their registration precincts. Polling places were associated with their polling place precinct, which is composed of one or more (often many more) registration precincts. We needed to acquire “crosswalk” data to merge the two files so that each voter could be associated with a polling place precinct and its corresponding address. We obtained these data from both the Los Angeles County Registrar itself and from Karin McDonald of the Statewide Database at the Institute of Governmental Studies; we are grateful to both.

Having created complete files for 2002 and 2003, the final step was to match voters from the two years and look at voting behavior changes between 2002 and 2003, contingent on whether one’s polling place was moved. We used the unique identifier Voter ID to match voters from both years; approximately 3% were not matched, probably due to normal churning (residential moving, mortality, etc.) in the electorate.

APPENDIX B: THEORY

Our model considers how the costs and benefits of voting are related to polling place, absentee, and nonvoting. The (utility) costs of voting at the polling place are represented by c^p (these costs consist of the sum of search and transportation costs) and the costs of voting absentee by c^a . The benefits of voting are represented by b .²³ Then the utility U_i^p that person i gets from polling place voting p will be the net benefits $b_i - c_i^p$ for voting at the polling place. The utility U_i^a for voting absentee will be the net benefits $b_i - c_i^a$ for voting absentee, and the utility U_i^n for not voting will be 0.²⁴ The

person will maximize his or her welfare by voting at the polling place ($p_i = 1$) if the net benefit of voting at the polls is greater than zero ($b_i - c_i^p > 0$) and the net benefit of voting at the polls exceeds the net benefits of absentee voting ($b_i - c_i^p > b_i - c_i^a$). The person will vote absentee if the net benefits of absentee voting are positive ($b_i - c_i^a > 0$) and the net benefits of absentee voting are greater than the net benefits of voting at the polls ($b_i - c_i^a > b_i - c_i^p$). Finally, the person will not vote if the (zero) net benefits of not voting are greater than the net benefits of voting at the polls ($0 > b_i - c_i^p$) and the net benefits of voting absentee ($0 > b_i - c_i^a$).

If we think of b_i , c_i^p , and c_i^a as realizations of random variables b , c^p , and c^a with a trivariate probability distribution that describes the voting population, then the proportion of people voting at the polls is equal to the following, where we have used capital letters to represent proportions:

$$\begin{aligned} P &= \text{Prob}(p = 1) = \text{Prob}(U_i^p > U_i^n \text{ and } U_i^p > U_i^a) \\ &= \text{Prob}(b - c^p > b - c^a \text{ and } b - c^p > 0) \\ &= \text{Prob}(c^a > c^p \text{ and } b > c^p). \end{aligned} \quad (1)$$

We get similar results for the proportion of people voting absentee:

$$\begin{aligned} A &= \text{Prob}(a = 1) = \text{Prob}(U_i^a > U_i^p \text{ and } U_i^a > U_i^n) \\ &= \text{Prob}(b - c^a > b - c^p \text{ and } b - c^a > 0) \\ &= \text{Prob}(c^p > c^a \text{ and } b > c^a). \end{aligned} \quad (2)$$

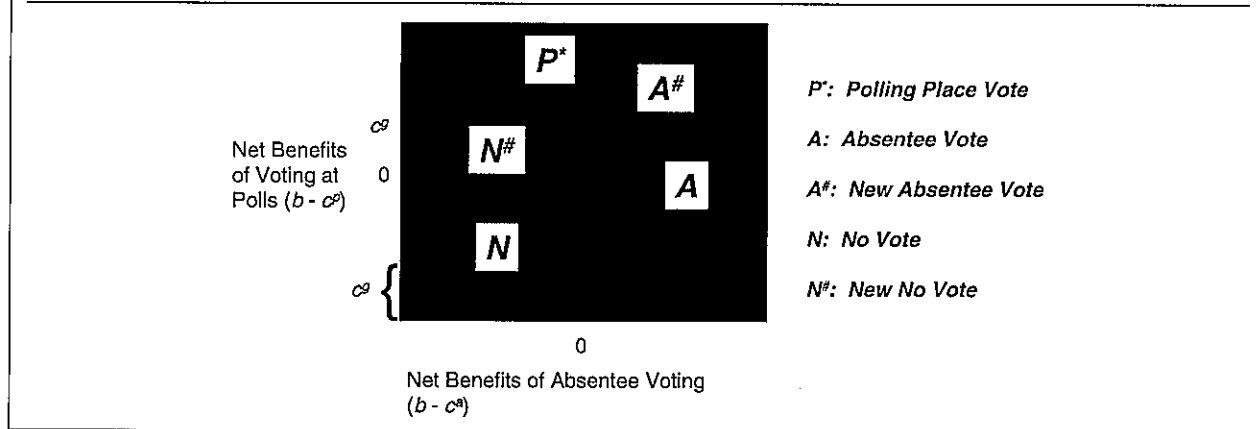
For the proportion of people not voting:

$$\begin{aligned} N &= \text{Prob}(n = 1) = \text{Prob}(U_i^n > U_i^p \text{ and } U_i^n > U_i^a) \\ &= \text{Prob}(0 > b - c^p \text{ and } 0 > b - c^a) \\ &= \text{Prob}(c^p > b \text{ and } c^a > b). \end{aligned} \quad (3)$$

Figure B1 shows the formulas where we plot net benefits from polling place voting ($b - c^p$) versus net benefits from absentee voting ($b - c^a$). Each voter will be located somewhere in this space, depending on his or her values of b , c^p , and c^a . If a third dimension were added to this picture, then it could represent the density of each kind of voter. The diagonal on Figure B1 represents the place where net benefits from polling place voting equals the net benefits from absentee voting. The

²³ We could assume that the benefits differed for polling place and absentee voting, but this simply creates an identification problem because benefits and costs always appear together as benefits minus costs. Thus, if the benefits of voting are greater for polling place voting than for absentee voting (e.g., because people get benefits from seeing friends at the polling place), then we can simply absorb these additional benefits into the costs of polling place voting (e.g., by saying that the costs of voting at the polling place are net of the benefits of seeing friends there). This might have the effect of making costs negative, but that poses no fundamental problem. We also assume that benefits are net of the decision costs of making up your mind for whom to vote.

²⁴ Thus, the voter’s decision problem is to maximize the expression $[(1 - n) * b - (1 - n) * a * c^a - (1 - n) * p * c^p]$ by choosing p , a , or n .

FIGURE B2. Voter Decision Making with Shift in Cost of Polling Place Voting

zero line on each axis represents the place where net benefits are zero. The nonvoters, indicated by N on the picture, are in the lower left-hand quadrant where net benefits are negative for both polling place and absentee voting (where $0 > b - c^p$ and $0 > b - c^a$). The polling place voters, P , are above the diagonal ($b - c^p > b - c^a$) where the net benefits of polling place voting exceeds the net benefits of absentee voting, and they are above the zero net benefits line for polling place voting ($b - c^p > 0$). The absentee voters are below the diagonal ($b - c^a > b - c^p$) and to the right of zero net benefits for absentee voting ($b - c^a > 0$). The proportion in each of the three groups depends on the density of voters in each area. In the 2002 Los Angeles County governor's race, 55.1% of those registered did not vote, about 35.8% voted at the polling place, and 9.1% voted absentee, indicating that there were many voters in all three groups.

Now, consider what happens with precinct consolidation (and changes in polling places for some people) through the grouping of contiguous precincts. Assume that all precincts are grouped and that the additional cost of voting at the polling place due to grouping, c^s , is positive for everybody because of additional search and transportation costs. For voters, the cost of voting at the polling place increases from c^p to $c^p + c^s$. Then the proportions change to the following:

$$\begin{aligned} P^* &= \text{Prob}(c^p + c^s > c^a \text{ and } b > c^p + c^s). \\ A^* &= \text{Prob}(c^p + c^s > c^a \text{ and } b > c^a). \\ N^* &= \text{Prob}(c^p + c^s > b \text{ and } c^a > b). \end{aligned} \quad (4)$$

The first formula indicates that (as long as there are people at the margin for whom the change makes a difference) polling place voting will unequivocally decrease because c^s is greater than zero, and because there will be fewer people for whom the benefits of voting exceed the costs of polling place voting and for whom the costs of absentee voting are greater than the costs of polling place voting.

Figure B2 represents these changes by making shifts in two lines and by assuming that c^s is constant across all voters. First, the diagonal line in Figure B1 shifts upward by the amount c^s because the net benefits of polling place voting have decreased by that amount. Consequently, the net benefits of polling place voting will now only exceed or equal the net benefits of absentee voting for those people for whom their net benefits of polling place voting used to be c^s units or bigger than the net benefits of absentee voting. Second, the horizontal "zero" line shifts upward by c^s because the

net benefits of polling place voting are now greater than zero only for those people for whom the benefits used to be at least c^s units bigger than zero. The resulting picture has two areas where voters move away from polling place voting. $A^{\#}$ designates people who turn to absentee voting. $N^{\#}$ designates people who no longer vote. Those who move into absentee voting will be people who always believed that the benefits of voting outweighed the costs of absentee voting but who formerly found it cheaper to vote at the polling place than through absentee ballots and now find it better to vote absentee because of the added cost, c^s , to polling place voting. Those who move into nonvoting will be those who never voted absentee (and will not now) because they calculate the costs of absentee voting to be greater than the benefits of voting, but they voted in the past because they found the benefits of voting at the polls to be greater than the costs of voting there. With the additional costs of voting at the polls, and with their long-standing belief that absentee voting costs more than the benefits of voting, they decide not to vote at all. The relative size of each group will depend on the size of c^s and the density of voters in these areas.

Using Figures B1 and B2, we can write the proportions of each kind of voter (P^* , A^* , and N^*) in the final situation in terms of the proportions in the original one and those who change their behavior:

$$\begin{aligned} P^* &= P - N^{\#} - A^{\#} \\ A^* &= A + A^{\#} \\ N^* &= N + N^{\#} \end{aligned} \quad (5)$$

We can also write turnout as:

$$V^* = P^* + A^* = P + A - N^{\#} = V - N^{\#} \quad (6)$$

This formula shows that the change in turnout ($V^* - V$) will be the negative of the change in nonvoting ($-N^{\#}$), and turnout will decrease less than polling place voting because some people will move away from polling place voting into absentee voting.²⁵

These formulas can be used to show how changes in P , A , or N are related to changes in costs. Assume that $c^s =$

²⁵ It is easy to see that this discussion can be generalized to the more typical case where c^s is a random variable, representing different changes in costs for different people, although the results are somewhat more complicated if c^s is negative for some people.

δc^p , that is, c^s is a small change δc^p in the cost of polling place voting. Define the changes $\delta P = P^* - P$, $\delta A = A^* - A$, and $\delta N = N^* - N$. We focus on changes in polling place voting. Consider the definition of the derivative ($\delta P / \delta c^p \equiv P'$), where P' is the derivative of $P(c^s, c^p, b)$ with respect to c^p evaluated at the point where the derivative is taken. Then after rearrangement, we write:

$$\delta P = P^* - P = P' \delta c^p. \quad (7)$$

Consequently, observed changes in polling place voting ($P^* - P$) are proportional to changes in costs δc^p with P' as the “constant” of proportionality. The derivative P' will be negative (because increases in c^p lead to decreases in polling place voting as shown previously). If we are considering a set of various changes in costs (i.e., different “experiments”) so that δc^p varies, then we can plot δP versus δc^p to determine the *ceteris paribus* impacts of costs as long as P' is constant. If each “experiment” deals with a group of voters with a similar trivariate distribution of costs of absentee voting, benefits of voting, and costs of polling place voting (before any treatment), then P' will be constant across experiments and meaningful comparisons can be made.

Consider how this applies to the changes in search and transportation costs that were made in Los Angeles. Assume that search (s) and transportation (t) costs enter linearly into the polling place cost function so that $c^p = s + t$. Further assume that transportation costs can be represented by a nonlinear function of the distance (d) to the polling place, $t = d^\gamma$, where γ is positive so that transportation costs increase with distance.²⁶ Then:

$$c^p = s + d^\gamma \quad (8)$$

At zero distance, s measures the search cost, which is assumed to be constant. If γ is less than one, then marginal costs diminish with increased distance. A change in costs can occur with a change in s or a change in d .

The impact of a change in s alone or d alone can be measured by $P^* - P$ as long as the changes are randomly assigned so that P represents the polling place voting of the “control” group and P^* represents the polling place voting of the “treatment” group that gets the change. This might, however, give an incomplete picture of the impact of changes in d because the impact will vary significantly with the baseline value of d if the parameter γ is less than one, especially if it is less than about three-fourths. We can show this directly. For a change in d , we can write Equation (7) as:

$$\delta P = P^* - P = P'(\delta c^p / \delta d) \delta d. \quad (9)$$

In this formula, P' is as before (but evaluated at the current value of c^p) and the derivative ($\delta c^p / \delta d$) is:

$$(\delta c^p / \delta d) = \gamma d^{\gamma-1} \quad (10)$$

Consequently, we have that:

$$\delta P = P^* - P = (\gamma d^{\gamma-1}) P' \delta d. \quad (11)$$

If γ is less than one, then the quantity in parentheses is much bigger for smaller distances than for larger ones (i.e., its size is inversely related to distance) so that the slope of a plot

of δP versus δd will be much more negatively sloped (because of the sign of P') for smaller distances than for bigger ones (assuming that the value of P' stays about the same as these distances vary).²⁷ Thus, a change in distance to one's polling place will matter much more for those who initially travel short distances to their polling place than those who travel long distances. As a result, although an experimental approach will give the correct “average effect,” it will miss the important variation in the impact of distance on non-voting, which depends on the initial distance to the polls. Furthermore, in a nonexperimental situation, if the change in distance to the polls is correlated with the initial distance to the polls, then there could be bias in the estimates of the impact of changes in distance. This discussion implies that we should control initial distance to polling place in our analysis as well as other factors, even if initial distance to the polls is fairly well balanced initially between the experimental and treatment groups.

We can use this theory to get an equation for estimating the relationship between changes in polling place voting and changes in distance to the polling place. From Equation (8), we have the following when both search costs and distance to polling place changes:

$$\delta c^p = \delta s + \gamma d^{\gamma-1} \delta d \quad (12)$$

Using this equation and Equation (7), we can write that:

$$\delta P = P' \delta s + P' \gamma d^{\gamma-1} \delta d. \quad (13)$$

We might further assume that δs is some constant amount plus some amount that varies with observed characteristics such as age and unobserved characteristics ε :

$$\delta s = \alpha + \beta(\text{Age}) + \varepsilon. \quad (14)$$

Then we can write:

$$\delta P = P' \alpha + P' \beta(\text{Age}) + P' \gamma d^{\gamma-1} \delta d + \varepsilon. \quad (15)$$

This equation can be estimated using nonlinear least squares. If Age is measured from voting age (so that a person who is 18 in 2002 has age zero), then the parameters can be interpreted as follows: $P' \alpha$ is the baseline search cost (in terms of decreased polling place voting) for a person of zero political age (i.e., 18) whose polling place is changed, but for whom the distance to his or her polling place does not change ($\delta d = 0$); $P' \beta$ is the impact of aging one year; and $P' \gamma d^{\gamma-1}$ is the impact of a unit change in distance, which clearly depends on initial distance in 2002 (d) according to the parameter γ .²⁸ If the exponent γ is less than one, then marginal costs diminish with increased distance.

²⁷ This assumption seems reasonable because the functions N , A , and P are similar to probit or logit voting functions that are being evaluated at “intermediate” values (far away from the asymptotes) so that the functions are essentially linear within that range—with constant derivatives. But see the next footnote (28) for another approach.

²⁸ If we make an assumption about the functional form of the choice function, then we can get an equation that does not require the assumption that P' is approximately constant. For example, if we assume a multinomial logit form, then $P = \exp(b - c^p) / [\exp(b - c^p) + \exp(b - c^a) + 1]$, $A = \exp(b - c^a) / [\exp(b - c^p) + \exp(b - c^a) + 1]$, and $N = 1 / [\exp(b - c^p) + \exp(b - c^a) + 1]$. If we assume that P^* , A^* , and N^* are the same except that the c^p term is now $c^p + \delta c^p$, then we can show after some extensive algebra that $\delta P = P^* - P = [\exp(-\delta c^p) - 1] P (1 - P) / [1 + \{\exp(-\delta c^p) - 1\} P]$ (and similarly for δA and δN). If we further assume that $\exp(-\delta c^p) \sim 1 - \delta c^p$, then we get $\delta P = -\delta c^p P (1 - P) / [1 - \delta c^p P]$. We also

²⁶ It might be believed that we should write $t = \beta d^\gamma$, where β is a parameter; however, because the units for costs are arbitrary, we might as well set $\beta = 1$.

TABLE B1. Summary of Impacts of Changing Polling Place Locations for Entire Sample

| | Voting Equation for 2003: Treatment Minus Control Difference for Turnout | | |
|--|--|---|---|
| | Polling Place | Absentee Voting | Nonvoting |
| Baseline search cost ($P'\alpha$, $A'\alpha$, or $N'\alpha$) | -1.078*** (0.094) | -0.597*** (0.073) | 1.523*** (0.088) |
| Voting function derivatives (P' , A' , N') | -2.571*** (0.085) | 2.464*** (0.088) | -0.236 (0.282) |
| Power for distance impact (γ) | 0.359*** (0.020) | 0.655*** (0.020) | -0.179 (0.118) |
| Impact of age in years ($P'\beta$, $A'\beta$, or $N'\beta$) | -0.0360*** (0.0026) | 0.0366*** (0.0020) | -0.0004 (0.0025) |
| <i>R-squared</i> | 0.01396 | 0.01291 | 0.00240 |
| Turnout impact from distance term for polling place distance change of $\delta d = 0.1$, for value of d of | Predicted change in polling place turnout: $P' \gamma d^{\gamma-1} \delta d$ | Predicted change in absentee turnout: $A' \gamma d^{\gamma-1} \delta d$ | Predicted change in abstention: $N' \gamma d^{\gamma-1} \delta d$ |
| ... 0.05 mile | -0.630% | 0.454% | 0.144% |
| ... 0.10 mile | -0.404 | 0.357 | 0.064 |
| ... 0.25 mile | -0.224 | 0.260 | 0.022 |
| ... 0.50 mile | -0.144 | 0.205 | 0.010 |
| ... 1.00 mile | -0.092 | 0.161 | 0.004 |
| ... 2.00 miles | -0.059 | 0.127 | 0.002 |
| ... 5.00 miles | -0.033 | 0.093 | 0.001 |

Dependent variables are measured in percentages, distances are measured in miles, and age is measured in years.

*** Indicates coefficient is significant at .001 level.

Table B1 presents estimates for the various parameters in nonlinear least squares fits to Equation (15) for the three outcomes of percentage changes in polling place voting, absentee voting, and nonvoting. Table B1 also presents some estimates of impacts for a one-tenth mile change in polling place distance, depending on various 2002 distances to the polling place. This provides a simple way to interpret terms such as ($P'\gamma d^{\gamma-1} \delta d$).

It is important to understand what these estimates are and are not. If our conditional independence assumption holds, then our matching on age, distance to polling place in 2002, and voting status in 2002 amounts to stratifying our sample and then randomly assigning polling places within each strata. Consequently, we can determine the variations in the effects of the treatment across the different strata. However, these results should be interpreted very carefully. A negative coefficient for age, for example, means that changing polling places causes more nonvoting among older people than among younger people. It does not necessarily mean that a manipulation of age alone would decrease voting.

Table B1 provides some interesting results. Consider polling place voting. There was a one percentage point reduction in polling place voting simply due to search costs for a voter who was 18 in 2002. In addition, there was a substantial reduction in polling place voting due to age—about 0.036% for every year of age (or 0.36% for every 10 years of age) so that the average 47 year old voter had another 1% reduction due to search costs. The results for distance indicate that a

one tenth of a mile increase in distance to the polling place in 2003 led to between a 0.63% to 0.03% reduction in polling place voting with the bigger effects for those who were used to their polling place being located nearby. (The γ parameter is clearly statistically different from zero and statistically less than one so that we would expect these distance effects.)

For absentee voting, there is a somewhat surprising negative value of -0.597% for baseline search costs, which indicates that 18-year-old voters in 2002 who had their polling place changed but who did not have the distance to their polling place changed actually *reduced* their absentee voting. In fact, a more careful treatment of age suggests that this unlikely result does not occur. If we use dummy variables for 10-year age periods, then we find that there is, as the age coefficient in Table B1 suggests, an increase in absentee voting with age, and among those in the lowest age bracket, there is essentially no increase in absentee voting due to a change in polling place. Thus, the negative value for baseline search costs is essentially due to a (slight) nonlinearity in the impact of age. In fact, the coefficient of 0.366% for age shows that aging 16 years from 18 to 34 brings search costs to zero. It is also worth noting that the decrease in polling place voting due to age in the first column is almost exactly balanced by the increase in absentee balloting due to age.

Changes in polling place distance operate in roughly opposite directions by decreasing polling place voting and increasing absentee voting. The values for the derivative of the voting functions are about equal and opposite, but the value for the power (γ) of the distance term differs so that the curves have different shapes. The chart at the bottom of Table B1 shows that for one tenth of a mile change in distance, the reduction in polling place voting is much steeper with initial distance to the polling place than is the increase in absentee voting.

get $\delta A = \delta c^P PA/[1 - \delta c^P P]$, and $\delta N = \delta c^P PN/[1 - \delta c^P P]$. These, as they should, add to zero. We have estimated them directly by using sample quantities (from the control group) for P , A , and N , and we get similar, but more difficult to directly interpret, results to those presented in Table B1.

Finally, consider nonvoting. There is a large baseline effect of 1.523%, and there is no increase (or decrease) in nonvoting because of age. The most interesting result is that changes in distance have no statistically significant impacts on nonvoting. (Neither γ nor the value of the derivative of the nonvoting function is statistically significant.) This result is surprising given the mathematical model, which implies that the search cost and the related distance cost should be proportionate for all three turnout equations. This suggests to us that people are making decisions in a two-step, "boundedly rational" (Conlisk 1996) process. First, they decide whether to vote based on just the increased search costs imposed by changed polling places. Second, once they have decided to vote, they decide whether to vote at the polling place or absentee by also considering changed distances).

The discovery that distance costs have no statistically significant effects on nonvoting suggests that we should modify the model presented in Equation (4), where all costs of changing polling places c^s (composed of search and distance costs, $c^s = s + d^s$) were added to the voter's decision calculus for nonvoting as well as for absentee and polling place voting. Instead, we add search costs to the equation for voting or nonvoting (because specific transportation costs are hard to compute). Then the decision between absentee and polling place takes place in a second stage, conditional on the first, which takes into account both search and transportation costs:

$$\begin{aligned} N^* &= \text{Prob}(c^p + s > b \text{ and } c^a > b). \\ A^* &= \text{Prob}(c^p + c^s > c^a | \text{Vote}) \text{Prob}(\text{Vote}) \\ &= \text{Prob}(c^p + c^s > c^a | \text{Vote}) (1 - N^*) \\ P^* &= \text{Prob}(c^a > c^p + c^s | \text{Vote}) \text{Prob}(\text{Vote}) \\ &= \text{Prob}(c^a > c^p + c^s | \text{Vote}) (1 - N^*). \end{aligned} \quad (16)$$

With this amendment to our theory, the change $\delta N = N^* - N$ cannot depend on the change in distance, so we expect that distance ought not matter for nonvoting. Also note that this means that some people will vote in this model for whom both $b < c^a$ and $b < c^p + s + d^s$ (but for whom $b > c^p + s$) so that they would *not* have voted if they had taken the transportation costs d^s into account.

APPENDIX C: HIERARCHICAL LINEAR MODELS

Because registrants (the unit of observation) are nested within precincts and precincts are the object of the consolidation (which leads to the experimental treatment of changes in polling places for some people), using ordinary least squares (OLS) to calculate standard errors systematically and substantially overstates the precision of the estimate. More appropriate estimates of these t -statistics can be obtained by using hierarchical linear models (HLMs) (Raudenbush and Bryk 2002), which consider nested data such as voters inside registration precincts as part of the estimation method.

An OLS method estimates the impact of changing polling places on a dependent variable such as polling place voting by regressing an individual i 's polling place voting ($P_i = 1$ if voting at polling place, zero otherwise) on a dummy variable G_i for whether the polling place was changed by grouping together precincts ($G_i = 1$ for change, zero otherwise):

$$P_i = \beta_0 + \beta_1 G_i + \varepsilon_i \quad (1)$$

The HLM estimation equation takes both individual registrants (i) and registration precincts (j) into account by having

both a "first-level" equation for individuals and a "second-level" equation for registration precincts. In the first-level equation, individuals are also identified by their registration precinct, and the regression coefficient is assumed to vary by registration precinct (hence, the subscript j on both P and β):

$$P_{ij} = \beta_{0j} + \varepsilon_{ij} \quad (2)$$

In the second-level equation, the regression coefficient (in this simple model, only the intercept β_{0j}) is assumed to vary from registration precinct to registration precinct based on the registration precinct's treatment status:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} G_j + u_{0j} \quad (3)$$

This leads to this equation by substituting Equation (3) into Equation (2):

$$P_{ij} = \gamma_{00} + \gamma_{01} G_j + u_{0j} + \varepsilon_{ij} \quad (4)$$

Comparing Equations (1) and (4), we see that the inclusion of an error term u_{0j} accounts for the fact that the treatment effect might vary from one registration precinct to another.

REFERENCES

- Abadie, A., D. Drukker, J.L. Herr, and G. Imbens. 2001. "Implementing Matching Estimators for Average Treatment Effects in Stata." *Stata Journal* 1: 1–18.
- Abadie, A., and G. Imbens. 2006. "Large Sample Properties of Matching Estimators for Average Treatment Effects." *Econometrica* 74 (1): 235–67.
- Achen, Christopher. 1986. *The Statistical Analysis of Quasi-experiments*. Berkeley: University of California Press.
- Aldrich, John H. 1993. "Rational Choice and Turnout." *American Journal of Political Science* 37 (1): 246–78.
- Blais, Andre. 2000. *To Vote or Not to Vote*. Pittsburgh: University of Pittsburgh Press.
- Conlisk, John. 1996. "Why Bounded Rationality?" *Journal of Economic Literature* 34 (June): 669–700.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper and Row.
- Dunne, Stephanie, W. Robert Reed, and James Wilbanks. 1997. "Endogenizing the Median Voter: Public Choice Goes to School." *Public Choice* 93: 99–118.
- Dyck, Joshua J., and James G. Gimpel. 2005. "Distance, Turnout, and the Convenience of Voting." *Social Science Quarterly* 86: 531–48.
- Feddersen, Timothy J. 2004. "Rational Choice Theory and the Paradox of Not Voting." *American Economic Perspective* 18 (1): 99–128.
- Feddersen, Timothy J., and Wolfgang Pesendorfer. 1996. "The Swing Voter's Curse." *American Economic Review* 86 (3): 408–24.
- Feddersen, Timothy J., and Wolfgang Pesendorfer. 1999. "Abstention in Elections with Asymmetric Information and Diverse Preferences." *American Political Science Review* 93 (2): 381–98.
- Feddersen, Timothy J., and Alvaro Sandroni. 2006. "A Theory of Participation in Elections." *American Economic Review* 96 (4): 1271–82.
- Gerber, Alan, Donald Green, and Ron Shachar. 2003. "Voting May be Habit-forming: Evidence from a Randomized Field Experiment." *American Journal of Political Science* 47: 540–50.
- Gimpel, James G., Joshua J. Dyck, and Daron R. Shaw. 2006. "Location, Knowledge, and Time Pressures in the Spatial Structure of Convenience Voting." *Electoral Studies* 25 (1): 35–58.
- Gimpel, James G., and Jason E. Schuknecht. 2003. "Political Participation and the Accessibility of the Ballot Box." *Political Geography* 22: 471–88.
- Goodin, R.E., and K.W.S. Roberts. 1975. "The Ethical Voter." *American Political Science Review* 69 (3): 926–28.
- Green, Donald P., and Ian Shapiro. 1994. *Pathologies of Rational Choice Theory: A Critique of Applications in Political Science*. New Haven, CT: Yale University Press.

- Haspel, Moshe, and H. Gibbs Knotts. 2005. "Location, Location, Location: Precinct Placement and the Costs of Voting." *Journal of Politics* 67 (2): 560–73.
- Heckman, James J. 1979. "Sample Selection Bias as a Specification Error." *Econometrica* 47: 147–61.
- Highton, Benjamin. 1997. "Easy Registration and Voter Turnout." *Journal of Politics* 59 (2): 565–75.
- Highton, Benjamin. 2004. "Voter Registration and Turnout in the United States." *Perspectives on Politics* 2 (3): 507–15.
- Holland, Paul. 1986. "Statistics and Causal Inference." *Journal of the American Statistical Association* 81 (396): 945–60.
- Imbens, Guido. 2004. "Nonparametric Estimation of Average Treatment Effects under Exogeneity: A Review." *Review of Economics and Statistics* 86 (1): 4–29.
- Knack, Stephen. 1995. "Does 'Motor Voter' Work? Evidence from State-level Data." *Journal of Politics* 57 (3): 796–811.
- Knack, Stephen, and James White. 2000. "Election-day Registration and Turnout Inequality." *Political Behavior* 22 (1): 29–44.
- Leighley, Jan, and Jonathan Nagler. 1992. "Individual and Systemic Influences on Turnout: Who Votes? 1984." *Journal of Politics* 54 (3): 718–40.
- McNulty, John E., Conor M. Dowling, and Margaret H. (Molly) Ariotti. 2009. "Driving Saints to Sin: How Increasing the Difficulty of Voting Dissuades Even the Most Motivated Voters." *Political Analysis* 17 (4): 377–99.
- Mebane, Walter R., Jr., and Jasjeet S. Sekhon. 1998. "Genetic Optimization Using Derivatives: Theory and Application to Non-linear Models." *Political Analysis* 7: 189–213.
- Miller, Warren E., and J. Merrill Shanks. 1996. *The New American Voter*. Cambridge, MA: Harvard University Press.
- Morgan, Stephen L., and David J. Harding. 2006. "Matching Estimators of Causal Effects: Prospects and Pitfalls in Theory and Practice." *Sociological Methods and Research* 35 (1): 3–60.
- Mulligan, Casey B., and Charles G. Hunter. 2003. "The Empirical Frequency of a Pivotal Vote." *Public Choice* 116: 31–54.
- Neyman, Jerzey. 1923. "On the Application of Probability Theory to Agricultural Experiments: Essay on Principles, Section 9." Edited and translated by D.M. Dabrowska and T.P. Speed. *Statistical Science* 5 (4): 465–72.
- Niemi, Richard G. 1976. "Costs of Voting and Nonvoting." *Public Choice* 27: 115–19.
- Palfrey, Thomas R., and Howard Rosenthal. 1995. "Voter Participation and Strategic Uncertainty." *American Political Science Review* 79 (1): 62–78.
- Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Raudenbush, Steve W., and Anthony S. Bryk. 2002. *Hierarchical Linear Models: Applications and Data Analysis Method*. 2nd ed. Thousand Oaks, CA: Sage.
- Riker, William H., and Peter C. Ordeshook. 1973. *An Introduction to Positive Political Theory*. Englewood Cliffs, NJ: Prentice Hall.
- Rosenbaum, Paul. 2002. *Observational Studies*. 2nd ed. New York: Springer-Verlag.
- Rosenstone, Steven J., and John Mark Hansen. 1993. *Mobilization, Participation and Democracy in America*. New York: Macmillan.
- Rosenstone, Steven J., and Raymond Wolfinger. 1978. "The Effect of Voter Registration Laws on Voter Turnout." *American Political Science Review* 72 (1): 22–45.
- Rubin, Daniel. 1974. "Estimating Causal Effects of Treatments in Randomized and Non-randomized Studies." *Journal of Educational Psychology* 66: 688–701.
- Sanders, Elizabeth. 1980. "On the Costs, Utilities and Simple Joys of Voting." *Journal of Politics* 42 (3): 854–63.
- Sekhon, Jasjeet S. N.d. "Multivariate and Propensity Score Matching Software with Automated Balance Optimization: The Matching Package for R." *Journal of Statistical Software*. Forthcoming.
- Squire, Peverill, Robert Wolfinger, and David P. Glass. 1987. "Residential Mobility and Voter Turnout." *American Political Science Review* 81 (1): 45–66.
- Stein, Robert M. 1998. "Early Voting." *Public Opinion Quarterly* 62 (1): 57–59.
- Timpone, R.J. 1998. "Structure, Behavior, and Voter Turnout in the United States." *American Political Science Review* 92 (1): 145–58.
- Uhlener, Carole J. 1989. "Rational Turnout: The Neglected Role of Groups." *American Journal of Political Science* 33 (2): 390–422.
- Verba, Sidney, Kay Schlozman, and Henry E. Brady. 1995. *Voice and Equality*. Cambridge, MA: Harvard University Press.
- Wolfinger, Raymond E., and Steven J. Rosenstone. 1980. *Who Votes?* New Haven, CT: Yale University Press.

DEFENDANTS' EX. 4



ORIGINAL PAPER

Reprecincting and Voting Behavior

Brian Amos¹ · Daniel A. Smith¹ · Casey Ste. Claire¹

Published online: 8 June 2016
© Springer Science+Business Media New York 2016

Abstract Despite the expansion of convenience voting across the American states, millions of voters continue to cast ballots at their local precincts on Election Day. We argue that those registered voters who are reassigned to a different Election Day polling place prior to an election are less likely to turn out to vote than those assigned to vote at the same precinct location, as a new precinct location incurs both search and transportation costs on reassigned voters. Utilizing voter file data and precinct shape files from Manatee County, Florida, from before and after the 2014 General Election, we demonstrate that the redrawing of precinct boundaries and the designation of Election Day polling places is not a purely technical matter for local election administrators, but may affect voter turnout of some registered voters more than others. Controlling for a host of demographic, partisan, vote history, and geospatial factors, we find significantly lower turnout among registered voters who were reassigned to a new Election Day precinct compared to those who were not, an effect not equally offset by those voters turning to other available modes of voting (either early in-person or absentee). All else equal, we find that registered Hispanic voters were significantly more likely to abstain from voting as a result of being reassigned than any other racial group.

Keywords Voter turnout · Precincts · Gerrymandering · Elections · Florida · Election Administration

Electronic supplementary material The online version of this article (doi:10.1007/s11109-016-9350-z) contains supplementary material, which is available to authorized users.

✉ Daniel A. Smith
dasmith@ufl.edu

¹ Department of Political Science, University of Florida, Gainesville, FL 32611-7325, USA



Prior to every election, millions of eligible citizens across the country are tasked with locating and travelling to their assigned Election Day precincts to cast their ballots. For most “habitual” voters (Plutzer 2002; Gerber et al. 2003), this biennial ritual is often routine, entailing only minimal “search” and “transportation” costs (Brady and McNulty 2011; Haspel and Gibbs Knotts 2005). In most cases, the location of registered voters’ Election Day polling places—town halls, schools, community centers, churches or temples, fire stations—remain unchanged from previous years. Attendant costs for prospective voters to ascertain the location of their Election Day polling stations are thus often understood as being negligible.

Furthermore, in a growing number of states, voters now have an array of ballot delivery systems from which to choose, which presumably reduces even further the costs of voting. A generation ago, when scholars identified the effects of institutional barriers on voter turnout (Wolfinger and Rosenstone 1980), nearly all eligible voters had but a single day to exercise their franchise. Today, prospective voters no longer face the constraints of appearing at their designated polling station on the first Tuesday after the first Monday in November, between, say, 7 am and 7 pm, regardless of the weather or delays at the polls. From casting an early in-person ballot at a remote polling center to voting a no-excuse absentee ballot by mail or in person, millions of Americans are no longer geographically nor temporally bounded by where and when they may cast their ballots. Not surprisingly, given the expansion in both the mode and timing of voting across the American states, casting a ballot on Election Day is becoming a rarer event for many voters (McDonald 2009). With so many options available, many voters appear to be avoiding all costs associated with locating and getting to their Election Day polling stations.

Still, millions of Americans *do* continue to vote at their local precincts on Election Day. For now, we lay to the side the debate over the merits and turnout effects of “convenience voting” (Gronke and Miller 2012; Burden et al. 2014). Instead, we focus on a rather inconspicuous and routine election administration task that is regularly carried out by nearly all local election officials—the drawing of precinct boundaries and the selection of Election Day polling places. With the exception of two prominent studies (Brady and McNulty 2011; Haspel and Knotts 2005), scholars have not fully investigated how altering Election Day precinct boundaries and their accompanying polling locations may affect voter turnout, even though such changes may raise both the search and transportation costs for some voters.

The reason for the scholarly neglect is likely twofold. First, given the politically charged “voting wars” (Hasen 2012), the largely administrative decision of how precinct boundaries should be shaped and where polling stations should be located lacks a certain cachet. The high profile election and voting rights legislation in several states (and subsequent litigation) over controversial issues such as the requirement of strict photo voter IDs or the expansion (or contraction) of in-person early voting may be leading observers to look askance at the (re)location of Election Day polling places. Second, there is a presumption that the drawing of precinct boundaries and the designation of Election Day polling places is purely a technical matter. Reprecincting is often seen as a largely apolitical, efficiency-oriented means

of reducing the costs of holding elections, especially as the proportion of non-precinct early voting continues to rise in many jurisdictions.

Given the highly partisan voting wars in Florida since the 2000 presidential election (Hasen 2012), we are perhaps not as sanguine as Brady and McNulty (2011) or Haspel and Knotts (2005) to think that the process of reprecincting is largely devoid of political considerations. In their study of voter turnout in the 2001 Atlanta mayor election, Haspel and Gibbs Knotts (2005) find—contrary to their expectations—that voters whose Election Day polling station had moved were actually more likely to turn out than those whose station hadn't, even after controlling for the distance to the polls and a host of other individual-level and neighborhood factors. They reason that higher turnout among registered voters whose polling stations had been relocated may have been due to the *increase* in the total number of polling stations in the city, or, perhaps, because election administrators had mailed out postcards with the new location to these reassigned voters, thus mitigating additional information costs. Brady and McNulty (2011) find a decrease in turnout among those assigned to a new polling location, but take great pains to show that the reprecincting done in their case study was technical in nature, with the Los Angeles Registrar of Voters consolidating precincts in a nearly random fashion. The methods they use to correct for the possible non-randomness in the reassignment of precincts are appropriate in their effort to isolate the possible effects of some voters having to search for and get themselves to new polling locations.

We suggest, however, that the effect on voter turnout when Election Day polling stations are altered is not necessarily an unintended side effect. As many state's local election administrators are elected partisans (Kimball et al. 2006), the process of assigning polling places may not be an apolitical decision. Indeed, the introductory hook of Brady and McNulty's (2011: p. 115) study is an example from Houston, Texas where polling locations appeared to have been maliciously manipulated by local election officials. The geographic clustering and sorting of voters by party (Bishop 2008; Levendusky 2009) in many areas makes targeted disruptions of Election Day polling place continuity for electoral gain a distinct possibility. Election administrators may have ulterior motives when assigning a polling place, as it is certainly possible that the location or the distance to the polls might negatively affect the likelihood of some registered voters to turn out, especially those who do not have access to transportation, as Haspel and Knotts (2005) found in Atlanta. Though not entirely analogous, the redrawing of precinct lines by local election administrators could be subject to something quite like the gerrymandering of legislative districts, with strategic aims at play.

In what follows, we examine a recent decision by a county Supervisor of Elections (SOE) in Florida in 2014 to reconfigure the boundaries of some precincts and reduce the number of Election Day polling stations prior to the general election. Unlike thousands of other routine administrative decisions made by local elections officials to redraw precinct boundaries and designate polling stations, we argue that the 2014 redrawing of precinct boundaries and relocating of polling stations by the Manatee SOE was its own form of gerrymandering—the intentional manipulation of precinct boundaries so as to favor or disfavor racial or ethnic groups or a political

party. After briefly describing the reprecincting timeline as it unfolded in Manatee County, we offer a theory as to why some elections officials might use the power of the pen to redraw precinct boundaries for partisan reasons, notwithstanding the declining rate of voting on Election Day in many regions of the country, that hinges on the habituation of some Election Day voters. We then describe the data and methods we use to show that the decision to move Election Day polling places in Manatee County did not affect all groups equally, as Democrats, racial and ethnic minorities, and younger voters were disproportionately more likely to be moved to a new polling station. After documenting that the Manatee Supervisor of Election's decision to relocate some Election Day polling places does not appear to have been random, we then show that even seemingly marginal changes to Election Day polling locations altered the decision of some eligible voters to turn out to vote—by any available mode—more so than other registered voters.

The Politics of Reprecincting in Manatee County, Florida

Manatee County, located south of Tampa Bay on the Gulf Coast, is a typical Florida county. Medium sized, its population of roughly 350,000 is largely non-Hispanic white (73 %); blacks compose about 9 % of the population, and Hispanics a little more than 15 %. According to the May 2014 voter file, of the nearly 200,000 registered voters, whites are disproportionately more likely to be registered to vote, composing 84 % of the electorate, compared to less than 7 % black and less than 5 % Hispanic. Over 42 % of those registered in the county are Republicans, with Democrats making up about one-third of the electorate and No Party Affiliates (NPAs) about one-fifth. Manatee County's Supervisor of Elections, like nearly all of the 67 SOEs in the state, is elected for a four year term in a partisan election, and any changes to precincts in the county must be approved by a partisan county commission.

Since the release of the 2010 U.S. Census, the drawing of precinct lines and the placement of Election Day polling places in Manatee County have not been without controversy. In the 2010 election cycle, the county was divided into 127 precincts. Due to the increase in no-excuse absentee and early in-person voting at the expense of Election Day voting, the former SOE, Bob Sweat, trimmed the number of polling stations from 127 to 113 before the 2012 general election (Wallace 2012). Prior to the 2014 general election, newly elected SOE, Mike Bennett, recommended that the county make further reductions to Election Day precincts, cutting the number of polling stations to just 70.¹ In a February 1, 2014 memo to the Manatee Board of County Commissioners, Bennett (2014) justified this further reduction in the number of polling places. "Voter turnout has not decreased," Bennett wrote, as "voters are just choosing to use more convenient methods to vote." He pointed out

¹ In 2013, the Manatee County Supervisor of Elections consolidated precincts after the 2012 General Election and before the 2014 midterm election for a low-turnout special referendum election, which temporarily reduced the number of precincts to 99. Unlike the redrawing done in 2014, this was, with just one exception, a purely merging-type reprecincting akin to Brady and McNulty's (2011) case, rather than a situation where precincts were permanently split.

correctly that that “[t]he trend across the entire state has shown a steady climb in early voting, and vote by mail” which “gives me confidence that precinct consolidation is the right thing to do.” Polling place consolidation would, according to Bennett, allow the county to more easily staff its polling locations, look at purchasing new tabulation equipment, and afford the county “monetary savings.” Bennett’s arguments present a picture of an innocent, nonpartisan process.

Yet, there is good reason to think reprecincting in Manatee County, as in other counties in Florida and beyond, does substantially differ from Brady and McNulty’s (2011) study of how Los Angeles County temporarily consolidated polling locations prior to the October 2003 Special Election, as well as Haspel and Knott’s (2005) study of the relocation (and modest expansion) of polling locations before the 2001 Atlanta mayoral election. In contrast to what they take assume to be the standard relocation of polling stations “as a result of the redistricting that followed the 2000 census” (Haspel and Knotts 2005: 565), or what Brady and McNulty (2011) report as a largely technocratic and nonpartisan single-mindedness to reduce election costs by the Los Angeles County Registrar of Elections, there is evidence that the permanent reprecincting and reduction in the number of polling stations in Manatee County in early 2014 was not done dispassionately, with blind disregard of the partisan (or racial or ethnic) makeup of existing precincts. The SOE in Manatee County who was behind the process, Mike Bennett, was a proud Republican partisan, fully engaged in the hard-knuckled politics of electoral engineering. A self-described “hell-raiser” (Thomson 2012), the former state lawmaker whose constituencies included portions of Manatee County had received national attention when he cosponsored Florida’s infamous House Bill 1355 (Herron and Smith 2012, 2013). Among other controversial provisions, the successful omnibus election-reform bill eliminated address updates on Election Day, placed restrictions on individuals and groups engaged in voter registration efforts, and reduced both the number of days for early voting as well as the number of hours in each day it would be available, including removing voting on the final Sunday before Election Day, a date disproportionately popular with black voters in the state. During the debate over HB 1355 on the Senate floor in May 2011, then-Senator Bennett (R-Bradenton) gained notoriety when he argued that voting was “a privilege,” saying (Sharockman 2011):

Do you read the stories about the people in Africa? The people in the desert, who literally walk two and three hundred miles so they can have the opportunity to do what we do, and we want to make it more convenient? How much more convenient do you want to make it? Do we want to go to their house? Take the polling booth with us? This is a hard-fought privilege. This is something people die for. You want to make it convenient? The guy who died to give you that right, it was not convenient. Why would we make it any easier? I want ‘em to fight for it. I want ‘em to know what it’s like. I want them to go down there, and have to walk across town to go over and vote.

Given his passionate statements in 2011 as a state Senator, in which he stridently defended Republican-sponsored legislation that would later be undone by a federal court (Herron and Smith 2014), many observers were understandably skeptical

about the motives underlying Bennett's decision to redraw precinct boundaries and alter polling station locations three years later, after being term-limited out of the Senate and winning office as an SOE. The announcement of the new precincts was immediately criticized by county Democrats and the local chapter of the NAACP for intentionally targeting racial and ethnic minorities (Kennedy 2014). Yet, Bennett's newly proposed lines and polling locations were largely preserved, with the seven-member Board of County Commissioners supporting the new precincts by a 6 to 1 vote. Only one commissioner—the sole Democrat on the Board—opposed the new boundaries and polling stations (Kennedy 2014).

As Fig. 1 reveals below, Bennett's newly proposed boundaries did not merely consolidate existing precincts. The 38 % reduction in precincts, from 113 to 70 Election Day polling locations, also split existing precincts into as many as four newly drawn precincts, the borders of some straying only a few blocks from the current jurisdictional lines.

The descriptive statistics of which registered voters were drawn into a new polling location versus which voters retained their previous polling place, as presented in Table 1, shows that various demographic groups were not equally affected by the reprecincting done by SOE Bennett's office. Overall, 42.4 % of the 177,269 registered voters whose addresses did not change between 2012 and 2014 were assigned to new polling locations. Black registered voters were disproportionately likely to be reassigned, with a majority having to seek out an Election Day polling location that was different than in 2012. Hispanic registrants were less affected, but still more likely than whites to be reassigned to a new polling location.

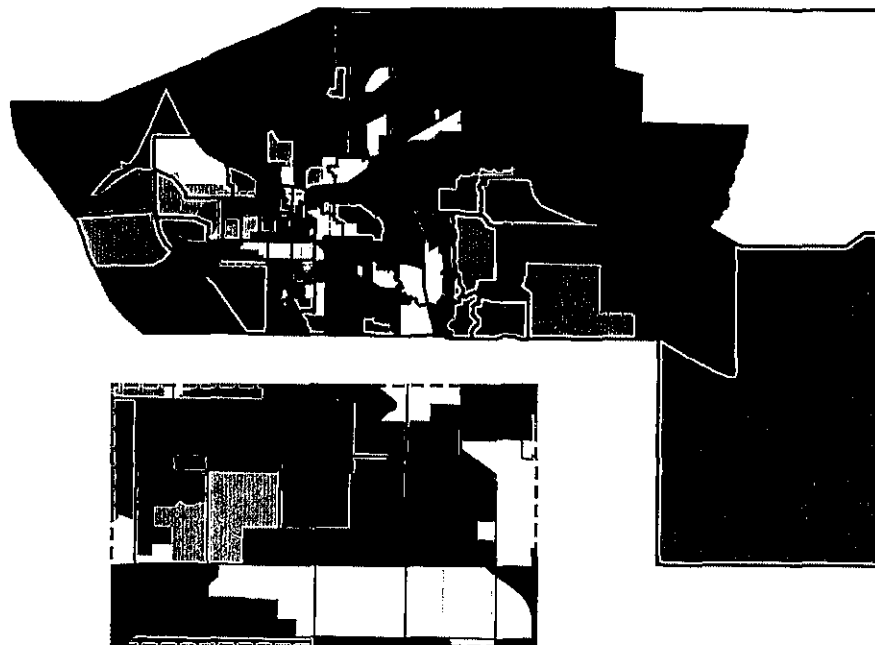


Fig. 1 2014 precincts (*black outline*) over 2012 precincts (*grey-scale shapes*), Manatee County. Portions of the city of Bradenton, outlined in the *top map* with a *dashed line*, presented in greater detail in the *bottom map*

Table 1 Percent reassigned to new polling locations by demographic and precinct characteristics

| | Same polling | New polling location |
|--------------------------------------|--------------------|----------------------|
| All registered voters | 57.60 % 102,109 | 42.40 % 75,160 |
| Race | | |
| White | 58.89 % 88,210 | 41.11 % 61,574 |
| Black | 46.59 % 5646 | 53.41 % 6473 |
| Hispanic | 52.17 % 4419 | 47.83 % 4052 |
| Other | 55.61 % 3834 | 44.39 % 3061 |
| Party | | |
| Democrat | 55.16 % 31,995 | 44.84 % 26,007 |
| Republican | 59.79 % 45,058 | 40.21 % 30,297 |
| NPA/other | 57.06 % 25,056 | 42.94 % 18,856 |
| Age | | |
| 18–29 | 53.65 % 9857 | 46.35 % 8517 |
| 30–64 | 57.51 % 54,718 | 42.49 % 40,435 |
| 65+ | 58.88 % 37,534 | 41.12 % 26,208 |
| Distance from polls, 2012 | | |
| Nearest quartile | 53.17 % 23,514 | 46.83 % 20,712 |
| Second | 60.59 % 26,811 | 39.41 % 17,442 |
| Third | 58.93 % 26,047 | 41.07 % 18,153 |
| Farthest quartile | 57.70 % 25,515 | 42.30 % 18,703 |
| Registered voters per precinct, 2012 | | |
| Smallest quartile | 48.42 % 22,048 | 51.58 % 23,490 |
| Second | 41.20 % 18,501 | 58.80 % 26,407 |
| Third | 66.81 % 28,719 | 33.19 % 14,266 |
| Largest quartile | 74.91 % 32,841 | 25.09 % 10,997 |

Each cell reports percentage on top, raw counts on bottom. Cutpoints for distance quartiles are 0.3692 miles, 0.6432 miles, and 1.0866 miles. Cutpoints for precinct populations are 1582 registered voters, 2382 registered voters, and 3331 registered voters. χ^2 tests for all tables are significant at $p < 0.001$

The differences by party were more subtle, but Republicans were considerably less likely to be assigned a new polling place, about 3.5 % less than their Democratic counterparts. Likewise, younger voters were more likely to be affected by the Election Day precinct changes than retirement-age voters.

The final two statistical categories for those who were reassigned and those who were not are broken down into quartiles and have non-linear patterns. The quartile of registered voters who lived nearest to their polling locations in 2012—those whose locations were the most convenient in terms of transportation and searching costs—were the most likely to be assigned new polling locations prior to the 2014 general election. Those registered voters living in the second distance quartile were most likely to retain their old polling location, with diminishing percentages thereafter. Not surprisingly, as consolidation was one of the stated goals of the Manatee SOE, voters in precincts with the largest number of registered voters were the less likely to be reassigned, though we find that those residing in the smallest quartile of 2012 registered voters per precinct were more likely to retain their polling place than the second quartile.²

To be sure, the mid-decade 2014 reprecincting in Manatee County, much like the processes in Atlanta (Haspel and Knotts 2005) and Los Angeles County (Brady and McNulty 2011) that occurred more than a decade ago, inevitably informs how scholars theorize about a common, but not well studied, local administration process. That some local election administrators might try to electorally engineer (Grofman and Liphart 1986) the rules of the game should not come as a surprise to observers in the trenches (Streb 2012; Norris 2004). Knowing that the reprecincting process in Manatee County affected various groups in different ways, we now turn our attention to how voter turnout might be affected by reprecincting.

Theorizing about Reprecincting

Given the “quiet revolution” (Gronke and Miller 2012) of convenience voting across the states which has expanded the voting opportunities for millions of registered voters, one might be especially dubious about linking voter turnout to changes of Election Day precinct boundaries and polling locations. In some states, such as Oregon, Washington, and most recently Colorado, all-mail elections have made Election Day precincts archaic. Manatee County SOE Bennett is correct that over the past two decades, casting a ballot has become considerably easier for millions of Americans, including many Floridians. Yet, extant scholarship on the effects of convenience voting on voter turnout is decidedly mixed (see Berinsky 2005; Neeley and Richardson 2001; Hanmer and Traugott 2004; Southwell and Burchett 2000; Fitzgerald 2005; Herron and Smith 2014; Stein 1998; Gronke 2008; Stein and Vonnahme 2010; Burden et al. 2014; Biggers and Hanmer 2015).³

² The patterns described hold when joined in a logit model, with retaining the same polling location as the dependent variable (results not shown). Distance, precinct population, and race are the most substantial variables in the model.

³ The expansion of opportunities to vote has recently hit some speed bumps. Some state legislatures and elections officials have rolled back existing reforms aimed at expanding the electorate (Scher 2011; Wang

Though the verdict is still out as to whether convenience voting increases an individual's likelihood of turning out to vote, the introduction of alternative methods of casting a ballot has complicated the calculus of voter turnout. Modeling a voter's decision to cast a ballot has become considerably more complex than it was when Downs (1957) and Riker and Ordeshook (1968) expounded on the rational choice of turning out. With the advent of more convenience voting opportunities in the form of early voting and absentee mail ballots, the ability of scholars to specify the possible costs for voters when choosing to cast a ballot under seemingly innumerable permutations is a technical nightmare.⁴ Those who are registered before Election Day in most states (and even eligible individuals who are not registered in some states) have many more options available to them when deciding whether to vote. As such, many registered voters have gravitated towards newly available modes of voting—requesting and mailing in an absentee ballot or voting in person at an early voting center outside the lines of their designated Election Day precincts. From a rational choice perspective, potential voters now have even more considerations when weighing the cost-benefit tradeoff of turning out to vote (Aldrich 1993).

Additionally, if the habit of turning out to vote (Plutzer 2002) is grounded in repetition, the availability of new modes of “convenience” voting does not necessarily make voting equally more convenient for all registered voters. “For turnout, like a great many behaviors” Aldrich, et al. (2011: p. 536) note, “the context is not fixed, and so we must consider not only the repetition of that behavior but also whether those repetitions are made in similar contexts.” For some registered voters, whose likelihood of turning out is “automated through behavioral repetition” (Aldrich et al. 2011: p. 536), the new modes of voting may not be any more convenient than casting a traditional ballot on Election Day. As much driven by habit as structural constraints or perception, the utilization of more “convenient” modes of voting may be circumscribed for many potential voters. Because convenience voting is not “self-actuating,” as Stein et al. (2005) argue, the ability of

Footnote 3 continued

2012; Herron and Smith 2014; Herron et al. 2016), or have even erected new barriers—such as strict photo ID laws—due to concerns over the risk of electoral fraud (Hicks et al. 2015). Notwithstanding the recent reversals on convenience voting, some scholars have argued that the very institutional expansion of convenience voting—to say nothing of the recent reversals—may actually lead to lower turnout. Early voting “has created negative unanticipated consequences by reducing the civic significance of elections for individuals” Burden et al. (2014: p. 95) suggest, “altering the incentives for political campaigns to invest in mobilization.” Beyond the aggregate effects of diminishing turnout, others have suggested that such expansionary reforms may even have a “compositional effect,” exacerbating “socioeconomic biases of the electorate” (Berinsky 2005).

⁴ For example: how many days of in-person early voting does a state offer, and how many days prior to Election Day does it commence and end? Is early in-person voting offered on weekends, or after normal business hours? What proof does a voter need to provide to receive a no-excuse absentee? How easy is it for a voter to be placed on a “permanent” absentee voter list and is return postage included? May absentee ballots be picked up by voters in person before an election, or dropped off before Election Day, or received or postmarked by Election Day? What constitutes an acceptable photo voter ID? Are reforms enforced uniformly across all local jurisdictions? When operationalizing these election reforms, scholars often rely on dichotomous indicators (see, for example, Burden et al. 2014), which may over-simplify the true variation in contexts.

some potential voters to shift to non-precinct, non-Election Day modes of voting may depend on the existence of mobilization efforts by various political parties and interest groups. For voters who have become habituated to vote on Election Day due to “behavioral repetition” (Aldrich et al. 2011: p. 536), especially those lacking material resources or not trusting alternative modes of convenience voting, a minor change in the location of an Election Day polling place might dampen turnout.

Thus, however ostensibly technical and random the changes, any decision to alter the location of Election Day polling stations may have a disruptive effect on a voter’s likelihood of going to the polls. In Florida, as in other states offering convenience voting, some people have become more habituated voters over time, voting early in-person, mailing in an absentee ballot, or waiting to vote on Election Day. Unless additional information is provided to voters, the costs borne by usual Election Day voters—seeking out and getting to the correct polling station—are expected to rise when election administrators change polling stations (Haspel and Gibbs Knotts 2005: p. 565). Ritualized Election Day voters—particularly those who are younger, less educated, and less mobile—might have considerable difficulties voting on Election Day if their polling station has been moved prior to an election. Although local election officials in Florida and elsewhere are required to inform voters about any changes to their assigned polling places, potential voters who wait until Election Day to cast ballots bear the full cost of searching for and getting to the polls, as voting early in-person or mailing an absentee ballot are no longer available options. And although many local elections officials may provide substantial voter education outreach and public service announcements to provide additional information about the closing of traditional polling places and the opening of new venues, there remain real “search” and “transportation” costs for potential voters (Brady and McNulty 2011: p. 117).

The notion that altering a precinct boundary (with or without moving a polling place) might have an effect on voter turnout is not too unlike research showing that turnout can be affected by the redrawing of legislative districts (Cox et al. 2002). Compared to the more visible and often highly political and partisan decennial process of drawing lines around populations—the gerrymandering of legislative districts—the decision by local election officials to draw precinct boundaries and locate polling stations, on the surface at least, appears to be much more innocuous. Indeed, neither of the systematic studies by Haspel and Gibbs Knotts (2005) and Brady and McNulty (2011) reflect the dynamics at play in Manatee County, where anecdotal evidence suggests that reprecincting was conducted with electoral, if not also partisan, gains in mind. Brady and McNulty’s analysis of precinct consolidation in Los Angeles did not involve the cracking of voters in existing precincts into newly created precincts, which clearly happened in Manatee County. There was no indication, according to Brady and McNulty (2011: p. 116), that the Los Angeles Registrar of Elections split or fragmented existing precincts or broke apart larger precinct boundaries; rather, the elections chief of the California metropolis only consolidated adjacent precincts to create a fewer number of larger ones which were “nearly randomly assigned.”⁵ Similarly, in the 2001 mayoral race in Atlanta, as

⁵ Arguing that the consolidation of precincts in Los Angeles County was conducted in a nonpartisan fashion, Brady and McNulty (2011: p. 116) report there was “no indication that the Los Angeles County

Haspel and Knotts (2005) note, the number of Election Day polling locations in Atlanta actually increased slightly due to splits caused by the 2000 legislative redistricting process. Contrary to the deference Brady and McNulty (2011) show to the Los Angeles Registrar of Elections, or the suggestion by Haspel and Knotts (2005) that the Atlanta reprecincting was the result of statewide redistricting in 2000, we are considerably more dubious that most local election supervisors draw precinct boundaries neutrally.⁶

Data, Methods, and Expectations

What are the turnout effects of polling place reassignment if it goes beyond the mere consolidation of polls and is not done randomly, but rather with consideration of the composition of the electorate? As should be clear, the theoretical priors that inform our empirical investigation into Manatee County's decision to reduce the number of Election Day polls diverges from Brady and McNulty's (2011) analysis of poll consolidation in Los Angeles. Most notably, our research design assumes, *a priori*, that the assignment of new polling places and the drawing of new precinct lines by local election officials are *not* likely to be done randomly, nor in a nonpartisan or race-neutral fashion. In fact, we decided to examine the mid-decade reprecincting in Manatee County because we were interested in isolating potential effects on turnout when local elections officials may intentionally be trying to alter precinct lines and polling places to advantage or disadvantage different groups of registered voters. Here, we are in agreement with Brady and McNulty's (2011: p. 116) observation that "there is a potential for major impacts if systematic attempts are made to disrupt voting in precincts that all lean in one partisan direction." We differ only in that we think the opportunity for manipulation during reprecincting might actually be more the norm than the exception. In short, the possibility of non-random, partisan, and racially biased—albeit latent—gerrymandering of precinct boundaries and polling locations might not be a rarity.

To assess the impact of reprecincting on voter turnout in Manatee County, we begin by defining our universe of registered voters who were affected by the boundary and polling place changes. We do so by comparing two discrete snapshots

Footnote 5 continued

Registrar of Elections manipulated polling locations so as to change more polling locations for those registered with one rather than the other major party." Rather, they emphasize that the consolidation of precincts and moving of polling stations in anticipation of the 2003 special election—which reduced the number of polling stations from 5231 to 1885—was carried out to reduce costs. Yet, in an early draft of their article, Brady and McNulty (2004: pp. 2–3) noted that across California prior to the Recall election, "Not every county consolidated precincts. In fact, most did not. Despite the cost factor, county administrators were loath to risk the possibility of a decline in voter turnout—and an increase in voter complaints—bound to occur given changes in long established polling places and a decrease in the density of the polling places offered."

⁶ Some local elections officials are required, statutorily, to split or consolidate precincts, altering their geographic boundaries, as well as find alternative polling stations. In Virginia, for example, state law limits the number of registered voters in each precinct, forcing local elections officers to alter district boundaries with some frequency.

of the dynamic Florida voter registration “file”: the first from March 30, 2013 (i.e., following the 2012 election),⁷ and the other from January 7, 2015 (i.e., following the 2014 election).⁸ The Florida voter file is actually comprised of two parts. The first (“Voter Extract”) includes an entry for each registered voter, labeled by a unique voter ID number that stays constant in the case of the voter changing addresses within the state, and records information like the address of residence, race and ethnicity, gender, birth date, as well as columns identifying which precinct and districts at various levels of government the voter resides in. The second part of the file (“Voter History”) has entries for each election each voter participated in, indicating the date of the election and the method the voter used to cast his or her ballot (e.g., at the polls, early, absentee, provisional).

By pairing voter IDs across the two snapshots and looking at the address of residence field, we can divide the universe into three groups: (1) registered voters who stayed registered at the same residence between 2012 and 2014 (177,269 people), (2) registered voters who moved within the county during that period (18,950 people), and (3) registered voters who either left the county’s rolls or were added to it (23,124 and 29,620 people, respectively). We focus our analysis on the first group, excluding all registered voters who moved between the two elections. Non-movers can further be separated into two groups: those who retained the same polling location for the 2012 and 2014 elections, and those who were assigned to a new location. Since the numbering scheme changed in the reprecincting process—and, regardless, polling locations can change across elections independent of precinct boundary changes—we requested and received lists of the polling locations used for each precinct for both elections from the Manatee County SOE office. We then used these lists to pair precinct numbers representing the same location across the two snapshots. Nearly 58 % of non-movers retained the same polling location across 2012 and 2014.

To test the effect of being reassigned to a new polling location both on turnout and the method of voting, we run a multinomial logit model at the individual level, with the dependent variable representing the vote (or non-vote) method in 2014: Election Day voting, early voting, absentee voting, and abstaining as the base category.⁹ The independent variable of interest is a dummy variable marked 1 if a

⁷ The January 2013 statewide voter provided by the Florida Division of Elections was corrupted, and was not cleaned until March, 2013. See Herron and Smith (2014). We excluded those who registered to vote after the state’s 29-day registration cutoff, as they were ineligible to vote in the 2012 election. Furthermore, Florida allows for 16- and 17-year-olds to pre-register to vote; those who had not yet turned 18 by the 2012 election were also excluded.

⁸ On this point, our research design differs from Haspel and Knotts (2005: 536), who report using a single voter file obtained by the Georgia Secretary to determine a voter’s residence, Election Day polling location, and turnout in the 2001 Atlanta election. Because they use a single snapshot from the voter file, they are unable to control for whether a voter in the 2001 mayoral election previously had resided at the same residence. In addition, they make no mention of whether voters who cast ballots in the mayoral election cast absentee ballots (as was permitted at the time in Georgia), rather than voting in person at their local precinct.

⁹ According to the 2015 voter file, 239 voters were coded as casting absentee ballots that were rejected; these were merged into the absentee voting category despite them not actually being counted. There were 33 voters who cast provisional ballots, 25 of which were accepted and were coded as to whether they were cast early or on Election Day (2 and 23, respectively), and were similarly merged into their respective categories. Since the remaining 8 rejected provisional ballots were not separated by the Florida “Vote

registered voter retained the same polling place between 2012 and 2014. We expect the coefficient for those voters who retained their Election Day polling place after reprecincting will be positive for turnout on Election Day in 2014, but negative for early in-person and absentee outcomes, replicating the substitution effect found by Brady and McNulty (2011).

As control variables, we include a range of individual-level demographics available from the statewide voter file. The major explanatory force are three dichotomous variables for the vote method used in 2012, broken down the same way we code our dependent variable (Election Day, early in-person, absentee) with non-voters as the excluded category. We expect those who voted in 2012 to be more likely to vote in 2014 than those who did not vote, and we expect continuity in their method of voting. We also include a dummy for “supervoters,” which is marked 1 for those who voted in 2008, 2010, and 2012 (and 0 for all others). We expect the coefficient for “supervoters” to be positive, even exceeding the explanatory power of the three modes of 2012 vote dummy variables. Similarly, we include a variable indicating the number of years the voter has been registered in Florida; even among non-supervoters, we expect voters registered longer to be more likely to turn out to vote than relatively new registrants. We include dichotomous variables for voters registered as Democrats and Republicans, with No Party Affiliates (NPA) and third-party registrants as the excluded category. Given the competitive partisan landscape—the 2014 election in Florida had a high-profile governor’s race that was expected to be, and ultimately was, quite close—and the usual drop-off of (often independent and Democratic) low-propensity voters in midterm elections, we expect the partisan dummies to be significantly positive relative to the excluded NPA category, and for the Republican coefficients to be larger than the Democratic coefficients.

We decompose race and ethnicity into four dummy variables: black, Hispanic, other non-white, and white (as the excluded category). We expect the relatively high minority turnout in the 2012 general election to recede in 2014 relative to white turnout, giving these coefficients a negative sign relative to the likelihood of white registrants turning out to vote in the midterm election. We include a variable for age, which we expect to be positive, and a dummy variable for male registrants as a control variable with no expectation that men will be more likely than women (who we combine with those registrants who chose not to identify their gender, as they make up less than 1 % of the universe) to turn out to vote.

As shown in Table 1 and as discussed above, Manatee County’s reprecincting affected some registered voters more than others depending on where they lived in the county. One factor was distance from the polling location in 2012; to address this, we calculated the actual distance to the polls both pre- and post-reprecincting for all voters who did not move their residence between the 2012 and 2014 voter file snapshots. Utilizing advancements in GIS, scholars have employed different techniques to calculate proximity to the polls. Many of these studies have consistently found a negative relationship between spatial distance to the polls and

Footnote 9 continued

History” file into early or Election Day voters, we merged them into the Election Day category, as this was the most likely scenario.

voter turnout. Early attempts, including Gimpel and Schuknecht (2003), used precinct-level data from Montgomery County, Maryland, to gauge the location of a voter's precinct polling place and its population centroid in order to estimate voter turnout. Subsequent studies have used individual-level data to estimate distance to the polls. Dyck and Gimpel (2005) estimated Manhattan-block distance for voters in Clark County, Nevada, and Haspel and Knotts (2005) used actual road networks to estimate distance to the polls for voters in Atlanta, Georgia.¹⁰ Gimpel, Dyck, and Shaw's (2006) study, most notably, also takes into account the proximity of where voters live to the closest early voting site. By connecting distance to vote-choice method, they find that as the proximity to an early voting site becomes closer, a voter's likelihood to cast an early in-person ballot increases.

We calculate distance by geocoding the residential addresses provided in the January 2015 voter file for each voter in our universe—that is, turning a mailing address into geographic coordinates. Our first pass on the data was made with the Address Range Feature shapefile provided by the U.S. Census Bureau for this purpose, and using their suggested method with the software system ArcGIS (Census 2013). This method found locations for about 90 % of voters; the addresses of those who were not matched were fed through the Google Maps Geocoding API, which is more advanced, but has a cap on usage making it infeasible as a tool for the entire universe.¹¹ After the second pass, we accounted for 99.8 % of the addresses in the assigned universe. We also fed the precinct polling locations through the Google Maps Geocoding API, allowing us to calculate Euclidean distances by comparing voters' locations with their polling places' locations.¹² For those who had different polling locations, we also calculated the difference between the 2014 distance and the 2012 distance to their polling place. We expect that as distance to the polls increases, voting on Election Day will decrease and alternative methods will increase as a way to deal with the increased transportation and searching costs associated with Election Day voting. We expect a similar pattern with our change in distance to Election Day polling places variable for similar reasons.

Finally, following Stein et al. (2014), we include two variables that would suggest a greater propensity to use convenience forms of voting. First, we calculate the Euclidean distance for each voter to his or her nearest early voting site in the same manner as we calculated the distance to the voter's Election Day polling place. One of the benefits of early voting is that voters are not tied to a particular site; rather, voters are permitted to cast ballots at any of the three sites that Manatee County made available in 2014, so voters may have, for instance, chosen to vote near their workplace or on their way to go shopping. All else being equal, though, we expect voters to be most likely to vote at the closest early in-person voting site to their residence. Second, while Florida does not have a permanent absentee voter list,

¹⁰ Because they use a single Georgia voter file to geocode the addresses of registered voters, Haspel and Knotts (2005: p. 563) necessarily include the vote histories of previously registered voters who moved to Atlanta as well as registered voters who may have moved within Atlanta.

¹¹ At least, when only relying on the free service—paid options for heavy use are available.

¹² Google Maps Geocoding API coordinates are in the WGS 84 system, which we convert to NAD 83 to match those geocoded using Census data; distance calculations were made using the NAD 83/UTM 17 N projection, which is standard for the Florida peninsula.

it does have something similar: voters are allowed to make a request for a ballot to be mailed for all elections through the second general election from the time of the request. Voters who are mailed an absentee ballot may vote through other means (or choose not to vote at all), but for obvious reasons, we expect these recurring absentee list voters to be especially likely to vote absentee. The Florida Secretary of State makes available a list of those voters who signed up to be sent an absentee ballot in the 2014 General Election, which includes the date of the standing request; we chose a cutoff of January 31, 2014—that is, the day before Supervisor Bennett made his recommendation for precinct changes to the Board of County Commissioners—as the date for such voters to be coded as a “recurring absentee voter.”

Findings

We present the results of our voter turnout multinomial logit model in Table 2. Given the size of our dataset, it is unsurprising that nearly all of our coefficients are significant. Some of our results are also unsurprising: those who voted in the 2012 General Election were more likely to vote by any method than to abstain in the 2014 election, compared with those who did not vote two years earlier in the presidential election. We also find that the most likely method of voting in 2014 was the same method used in 2012.¹³ Similarly, older voters were more likely than younger voters, white voters more likely than non-white voters, and supervoters more likely than non-supervoters to vote by any method rather than to abstain in 2014. Republicans showed the highest likelihood of voting by any method, while Democrats were only statistically distinguishable from NPAs in being more likely to vote early.¹⁴

Our dichotomous variable marking whether a voter’s polling place location was altered in 2014 confirms our expectations for Election Day voters. Registered voters who retained their polling place were more likely to vote on Election Day in 2014 (relative to abstaining) than those who were assigned a new polling location by SOE Bennett. However, we find no replacement effect based on polling location change, with insignificant coefficients for those who retained their Election Day polling place in both the early in-person and absentee voting models. All else equal, those voters who had their precinct altered prior to the 2014 election were no more or less likely to cast an early in-person or absentee ballot than those who retained their existing polling place.¹⁵

¹³ Also not surprising, overall turnout among those registered voters who maintained the same address in 2012 and 2014 was lower in the 2014 midterm election (53.9 %) compared to the 2012 presidential election (72.9 %). Overall turnout in 2014 among those voters who were not reassigned to a new polling station was 56.1 percent; overall turnout in 2014 among those who were reassigned a new polling station was 50.8 percent. Again, we are interested in the relative turnout rates among these two subpopulations—those keeping their polling station and those who were reassigned.

¹⁴ Data and replication code are publicly available at *Political Behavior* Dataverse, “Replication Data & Online Appendix for: Reprecincting and Voting Behavior,” <http://dx.doi.org/10.7910/DVN/XFHBPO>.

¹⁵ As a check on our method, we also ran a multinomial logit model weighted using Coarsened Exact Matching (Iacus et al. 2008; Stata implementation by Blackwell et al. 2009). Matching using CEM on variables significant across all three vote methods (2012 vote method, race, party, age, supervoter, recurring absentee ballot status, and distance to polls), as shown in the Online Appendix, Table A1, produces results substantively similar to our non-matching model: the gap in likelihood to vote on

Table 2 Multinomial logit model of vote method; excluded category is non-voting

| | Election day | | Early | | Absentee | |
|---------------------------------|--------------|------------|-------------|------------|-------------|------------|
| | Coefficient | Std. error | Coefficient | Std. error | Coefficient | Std. error |
| Retained polling place | 0.179** | 0.031 | 0.030 | 0.054 | 0.030 | 0.037 |
| Race/ethnicity: black | −0.255** | 0.041 | −0.441** | 0.063 | −0.772** | 0.056 |
| Race/ethnicity: Hispanic | −0.702** | 0.054 | −0.881** | 0.099 | −1.006** | 0.079 |
| Race/ethnicity: other non-white | −0.314** | 0.057 | −0.521** | 0.098 | −0.621** | 0.072 |
| Age | 0.010** | 0.000 | 0.021** | 0.001 | 0.034** | 0.001 |
| Party: Democrat | 0.048 | 0.030 | 0.160** | 0.050 | −0.009 | 0.036 |
| Party: Republican | 0.175** | 0.029 | 0.209** | 0.047 | 0.163** | 0.033 |
| Male | 0.181** | 0.014 | 0.261** | 0.024 | 0.057** | 0.017 |
| Supervoter ('08, '10, '12) | 1.429** | 0.017 | 1.526** | 0.028 | 1.181** | 0.020 |
| Distance to polls | −0.112** | 0.009 | 0.358** | 0.015 | 0.103** | 0.010 |
| Change in distance to polls | 0.015 | 0.014 | −0.195** | 0.020 | −0.029 | 0.015 |
| 2012: Voted election day | 2.562** | 0.024 | 2.255** | 0.057 | 1.528** | 0.031 |
| 2012: Voted early | 2.475** | 0.034 | 4.185** | 0.060 | 2.543** | 0.040 |
| 2012: Voted absentee | 1.200** | 0.032 | 1.958** | 0.064 | 2.929** | 0.031 |
| Distance to early voting site | 0.062** | 0.024 | −0.145** | 0.007 | −0.008 | 0.004 |
| Recurring absentee voter list | −0.981** | 0.050 | −1.109** | 0.083 | 1.126** | 0.028 |
| Years registered | 0.003** | 0.001 | −0.003* | 0.001 | −0.001 | 0.001 |
| Retain poll × black | −0.061 | 0.057 | 0.064 | 0.091 | 0.080 | 0.078 |
| Retain poll × Hispanic | 0.041 | 0.071 | 0.225 | 0.135 | 0.341** | 0.103 |
| Retain poll × other non-white | −0.124 | 0.075 | 0.159 | 0.133 | 0.146 | 0.096 |
| Retain poll × Democrat | 0.094* | 0.039 | −0.002 | 0.068 | 0.025 | 0.047 |
| Retain poll × Republican | 0.070 | 0.037 | −0.046 | 0.063 | −0.011 | 0.044 |
| Constant | −3.762** | 0.040 | −5.933** | 0.080 | −5.232** | 0.051 |

N = 176,906

* p < 0.05, ** p < 0.001

Looking at the other independent variables, distance to the voting site matters. Election Day location distance creates the expected effect, with those living nearer being more likely to vote at the polls and less likely to vote early or absentee. Early voting location distance is similarly intuitive, with those nearer to a site more likely to vote early and less likely to vote on Election Day (although with no effect on absentee voting). Those on the recurring absentee voter list are much more likely to vote absentee and less likely to vote early or on Election Day, and we find those registered for a longer period in Florida are more likely to vote on Election Day and slightly less likely to vote early.

Footnote 15 continued

Election Day between those who were and were not assigned a new polling location was 4.5 %, and the overall effect on turnout was 2.6 %. Both are significant differences at p < 0.001.

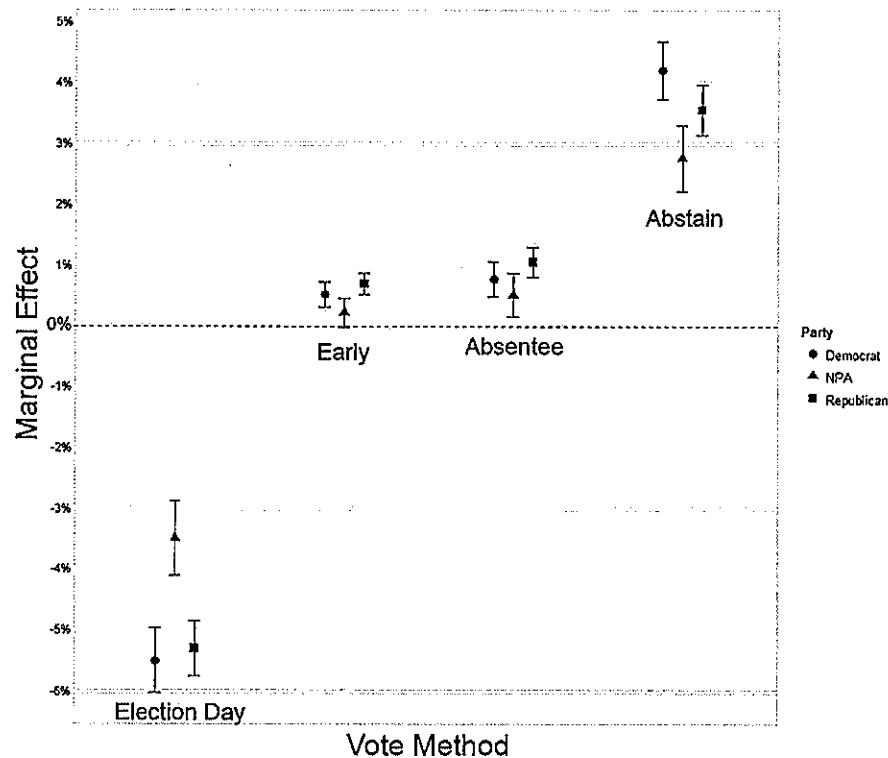


Fig. 2 Marginal effect of being assigned to a new polling location on 2014 vote method among 2012 Election Day voters, by registered party. Whiskers reflect 95 % confidence intervals

To make clearer the effect of changing polling locations, we present two figures illustrating the substantive effect of the multinomial logit model, Figs. 2 and 3. Both estimate the change in likelihood of voting by a particular method (or abstaining) for someone who voted at the polls on Election Day in 2012 if they were reassigned to a new polling location; Fig. 2 does so broken down by party registration and Fig. 3 does so for race and ethnicity.

General trends stand out immediately: those who were assigned to a new polling location were less likely to go to the polls on Election Day in 2014 and more likely to abstain than those who kept their polling location. These trends are less severe for NPA/Independent voters relative to partisans, and Democrats were more likely to be affected by polling location changes than Republicans. Furthermore, while those assigned new polling locations were more likely to vote early or absentee, the greater use of these convenience methods was not enough to make up the Election Day gap in total overall turnout.

The racial and ethnic trends broadly follow the partisan trends, but with larger differences between the groups. White voters showed the largest Election Day marginal effect of being assigned to a new polling location, with a predicted 5.2 % decline. However, they were significantly more likely to use a replacement method, with early in-person and absentee voting making up a combined 1.7 % of the gap. Reassigned black, Hispanic, and other non-white voters were actually less likely to vote absentee than those who retained their 2012 location, and among Hispanic and

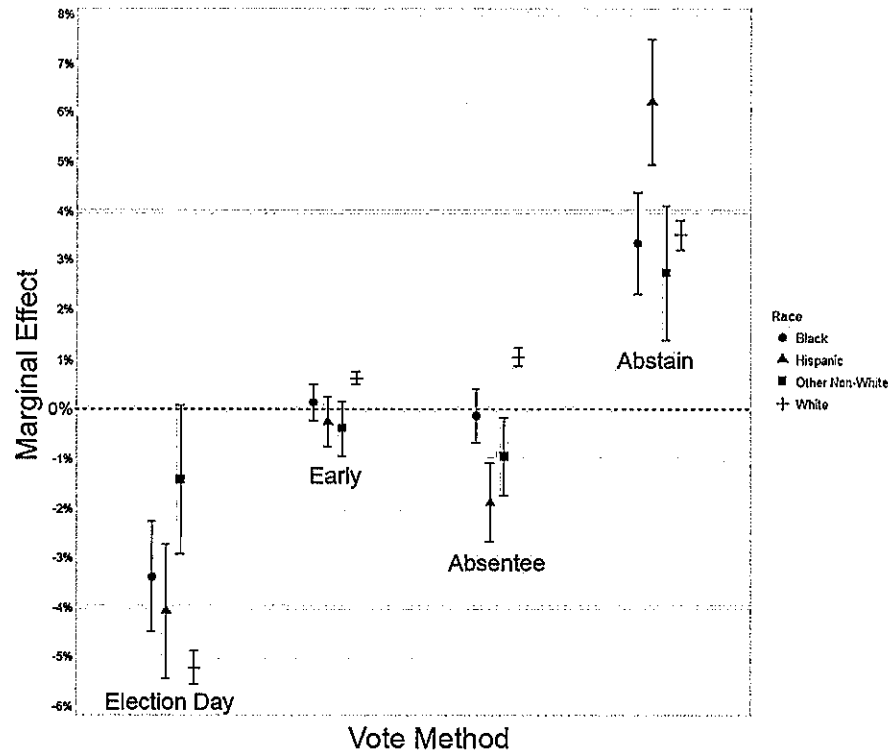


Fig. 3 Marginal effect of being assigned to a new polling location on 2014 vote method among 2012 Election Day voters, by race. Whiskers reflect 95 % confidence intervals

other non-white voters, this negative effect holds when combined with early voting. As a result, the significant difference between white voters and black and other non-white voters in the marginal effect of voting on Election Day is counteracted enough to make the differences fall within the 95 % confidence interval for abstaining, while Hispanic voters were significantly more likely to abstain as a result of being reassigned than any other race/ethnicity.

Figures 2 and 3 only address voters who cast a ballot at the polls on Election Day in 2012, as our expectation is that they are most likely to be affected by a change in polling location. Though we controlled for several variables that could potentially differ systematically between those who were assigned new polling locations and those who weren't, there may be unobserved factors driving our findings; voters who were given new polling places may have been less likely to turn out than those who weren't regardless of whether their polling place changed or not. By looking at those who voted early or absentee in 2012, we can get a rough check on this possibility, as they should be less affected by polling place changes, especially when looking at their propensities to vote early or absentee again. However, if we find that these reassigned non-Election Day voters were less likely to vote by the same method than those who retained their polling locations, the effect may be driven by unobserved characteristics rather than by the effect we are measuring. Figure 4 breaks down our universe of non-movers by voting method in 2012, and looks at the marginal effect of being reassigned on voting method in 2014.

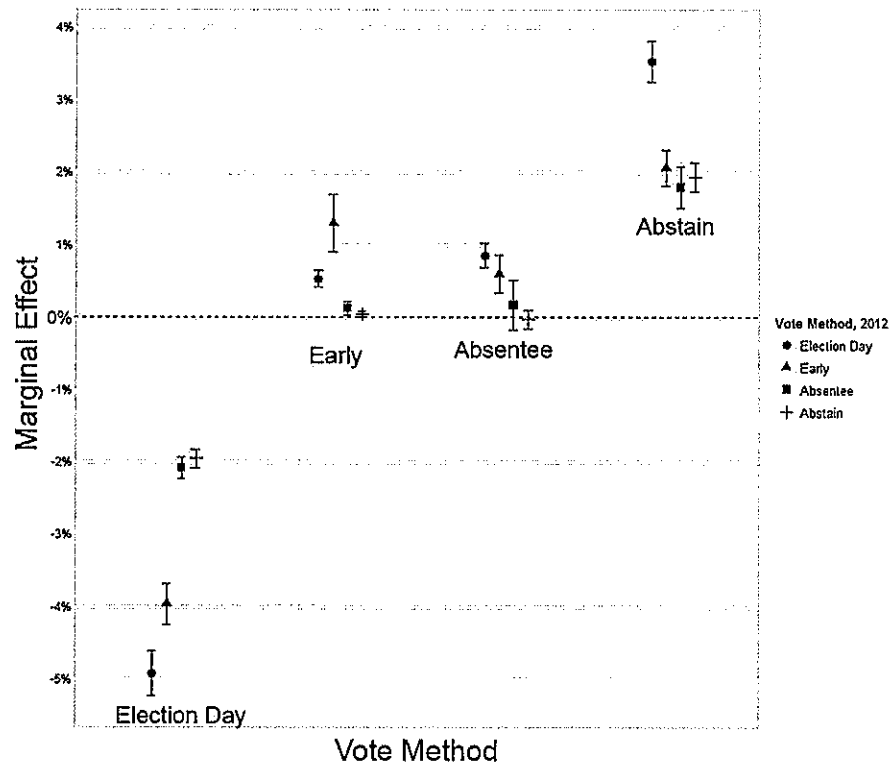


Fig. 4 Marginal effect of being assigned to a new polling location on 2014 vote method by 2012 vote method. Whiskers reflect 95 % confidence intervals

Again starting with a general overview, the patterns are broadly similar in Fig. 4 as those found in Figs. 2 and 3. There is a rise in abstention among those who were reassigned polling locations, even among early in-person and absentee voters, which suggests some unobserved variables may be driving some of the difference, but these declines are a product of a drop in Election Day voting, rather than in early and absentee voting. Furthermore, the gap in Election Day voting is much more pronounced among 2012 early in-person voters than absentee. A large reason for this is likely due to the difference in propensity to vote on Election Day among these two groups of voters: beyond abstainers continuing to abstain, absentee voters continuing to vote absentee had the highest probability among the 16 possible pairings of 2014 vote method given a 2012 vote method, at 53.7 %. Early in-person voters in 2012, however, were actually slightly more likely to vote on Election Day than to continue to vote early (27.9 vs. 25.9 %). This suggests that absentee voting is more of a habitual process than voting early in-person, especially given the recurring absentee status that is allowed in Florida. Additionally, voters who cast ballots early in-person in the past are better equipped to vote early again in the future, as the education costs have already been borne; in the face of uncertainty in their Election Day polling place, voting early is an easier replacement for these 2012 early voters than for the average 2012 Election Day voter. In any case, as we had expected, the polling place reassignment effect on turning out to vote is largest

among 2012 Election Day voters (3.5 %), an effect nearly twice as large as among 2012 early in-person and absentee voters (2.1 and 1.8 %, respectively).

But what is the substantive impact on turnout due to the reduction in Election Day precinct locations? Compared to the counterfactual in which no precinct locations were altered, our model indicates that turnout among non-movers likely decreased by 1609 voters (from a predicted 97,155 to the reality of 95,546) due to the altered precinct polling location, a drop of 1.7 %. The share of the vote cast by NPAs and third party registrants remains virtually unchanged in our model, but we find that the share of turnout among Democrats was depressed by 0.2 % due to the changes made, offset by an increase of 0.2 % among Republicans. This change in the partisan makeup of the electorate may seem modest, but it could have had an impact on down-ballot contests, especially at the county and municipal levels. And, of course, Florida is notorious for a top-of-the-ticket race being decided by just hundreds of votes, with national consequences in the 2000 presidential election.

With regard to race and ethnicity, our prediction of the counterfactual shows the smallest impact in turnout percentage on white voters. However, because the overwhelming share of voters in the 2014 election in Manatee County were white—about 90 %—they actually see the largest decrease in the share of the electorate in our model due to the polling location changes, at the expense of the other three racial and ethnic groups. Still, the decrease in share among the other racial and ethnic groups is noteworthy, especially Hispanic voters; our model predicts that there was a fall of 158 voters (from 2262 to 2420), a 6.5 % decrease, due to the change in Election Day precincts.

Conclusion

After more than a decade of “voting wars” in Florida and beyond (Hasen 2012), the possibility that local election officials might strategically utilize a prosaic process to achieve partisan gains should not come as a surprise to many observers. The mid-decade reprecincting spearheaded by the Manatee County Supervisor of Elections appears to be such a case. There is good reason to suspect that the redrawing of precinct lines and the reduction in the number of Election Day polling stations in the counties was not done randomly or without consideration of potential electoral consequences. At the time, activists voiced concerns about SOE Bennett’s proposed changes to precinct boundaries and polling station locations, asserting that poor and minority voters would be especially affected. “I think the people most adversely affected by the changes were not taken into consideration,” Susie Copeland, the President of the Manatee County chapter of the NAACP, commented, as “[the] more affluent community was left alone, and as far as their polling place, they didn’t suffer same kind of closings as poorer neighborhoods” (Kennedy 2014). “Most of the people I’m worried about do not have bus service,” the Chairwoman of the county’s Democratic Party stated, asking, “Who’s going to get these people there?” (Kennedy 2014).

How well might our conclusions from a single county in Florida generalize to other contexts? It is important note that our results differ considerably from the

dominant account of the reprecincting process. As technically precise and convincing are the studies by Haspel and Knotts (2005) and Brady and McNulty (2011), we remain dubious that Atlanta's new precincts drawn in 2000 and the temporary 2003 precinct consolidation in Los Angeles County a decade ago are representative of how reprecincting is conducted in the rest of the country. Indeed, in California in 2003 Secretary of State Kevin Shelly voiced concern that the consolidation of Los Angeles County polling stations "openly encouraged voters to use the absentee ballot amid worries that polling places would be overcrowded," and he raised the alarm for "potential for long lines at the polls" on Election Day (Barreto et al. 2006: p. 225). At a minimum, then, our examination of the redrawing of precinct lines and the relocation of polling places in Manatee County, Florida, should encourage election observers to be more circumspect in an era of partisan polarization, as administrative changes may be intentionally designed with partisan or turnout effects in mind.

Ironically, as we noted earlier, as registered voters become more habituated to the many available modes of convenience voting, it becomes easier for local election administrators to justify reducing Election Day polling places or reconfiguring precinct lines. The alteration of Election Day polling places in Manatee County was not random: minorities, Democrats, and younger registered voters were disproportionately more likely to be reassigned to a new polling place in 2014 than other registered voters. Even after controlling for distance to the polls and early voting sites, we find those voters who faced increased transportation and searching costs in the 2014 General Election because their polling location was moved had lower turnout on Election Day, which was not fully counteracted by early in-person or absentee voting. The differential impact on voter turnout from Manatee County's decision to move precinct lines and alter polling places was neither random nor insignificant.

Unlike legislative redistricting battles, which receive considerable attention by the press, activist groups, and scholars, the redrawing of precinct boundaries and the reassignment of polling stations often falls below the radar. In addition to being difficult to detect, these decisions are often couched in nonpartisan, technical, or cost-savings language. Indeed, in Atlanta and Los Angeles the reprecincting and selection of polling places was ostensibly conducted randomly. But what if they are not? As Brady and McNulty (2011: p. 128) caution, if polling places are not assigned randomly, turnout effects "are large enough that they could be used by an unscrupulous politician or registrar to manipulate an election." As we show, the nonrandom precinct changes in Manatee County had substantial consequences on turnout across racial and ethnic, partisan, and age groups. Even if other modes of convenience voting are made available, as was the case in Florida in 2014, nonrandom reprecincting can have significant consequences on turnout, as an increase in transport or search costs due to consolidation might not be equally spread across the eligible electorate.

The fact that we find more than a minor effect of altering Election Day polling stations on turnout is perhaps surprising, considering the mixed effects that scholars attribute to various convenience voting reforms. Given how much press convenience voting reforms have generated, attention to changes in precinct boundaries

has been minimal. That we find that alterations to Election Day polling stations do not appear to be random—falling disproportionately on racial and ethnic minorities as well as younger voters and those registered to vote with the Democratic Party—should be cause for some concern not only for election officials but also the general public. Not only can seemingly benign changes to precinct boundaries and polling place locations marginalize voters who habitually depend on traditional Election Day voting, it can affect their propensity to vote at all in a subsequent election. As with legislative gerrymandering, the redrawing of precincts can be done with the aim of advantaging or disadvantaging the turnout of certain populations. But even local election administrators who have the purest of intentions should be wary about altering precinct boundaries or polling station locations, as such changes might unintentionally disrupt the electoral process. That the process of drawing precinct lines that are constitutive parts of legislative districts has received so little scrutiny by political activists and scholars is surprising, as locating registered voters into these geographic units can have significant ramifications for political participation and partisan outcomes.

References

- Aldrich, J. H. (1993). Rational choice and turnout. *American Journal of Political Science*, 37, 246–278.
- Aldrich, J. H., et al. (2011). Turnout as a habit. *Political Behavior*, 33, 535–563.
- Barreto, M., et al. (2006). Controversies in exit polling: Implementing a racially stratified homogenous precinct approach. *PS. Political Science & Politics*, 39, 477–483.
- Bennett, M. 2014. Memo to Board of County Commissioners. Manatee County Supervisor of Elections Office. February 1. Available: <http://www.myanatee.org/published/REVISED%20February%2011,%202014%20-%20Regular%20Meeting%20on%20Tuesday,%20February%2011,%202014/7E079A9C-1EB6-4AAA-B7DA-3C5D4E57195C.pdf>.
- Berinsky, A. J. (2005). The perverse consequences of electoral reform in the United States. *American Politics Research*, 33, 471–491.
- Biggers, D. R., & Hanmer, M. J. (2015). Who makes voting convenient? Explaining the adoption of early and no-excuse absentee voting in the American States. *State Politics & Policy Quarterly*, 15, 192–210.
- Bishop, B. (2008). *The big sort*. New York: Houghton Mifflin.
- Blackwell, M., Iacus, S., King, G., & Porro, G. (2009). CEM: Coarsened exact matching in stata. *The Stata Journal*, 9, 524–546.
- Brady, H. E., & McNulty, J. E. (2004). *The costs of voting: Evidence from a natural experiment*. Palo Alto, CA: Annual meeting of the Society for Political Methodology.
- Brady, H. E., & McNulty, J. E. (2011). Turning out to vote: The costs of finding and getting to the polling place. *American Political Science Review*, 105, 115–134.
- Burden, B. C., Canon, D. T., Mayer, K. R., & Moynihan, D. P. (2014). Election laws, mobilization, and turnout: The unanticipated consequences of election reform. *American Journal of Political Science*, 58, 95–109.
- Census Bureau. 2013. Geocoding Using ArcGIS and TIGER/Line Shapefiles. <http://www2.census.gov/geo/pdfs/education/brochures/Geocoding.pdf>.
- Cox, G. W., & Johnathan, N. K. (2002). *Elbridge Gerry's Salamander: The electoral consequences of the reapportionment revolution*. New York: Cambridge University Press.
- Downs, A. (1957). An economic theory of political action in a democracy. *The Journal of Political Economy*, 65, 135–150.
- Dyck, J. J., & Gimpel, J. G. (2005). Distance, turnout, and the convenience of voting. *Social Science Quarterly*, 86, 531–548.

- Fitzgerald, M. (2005). Greater convenience but not greater turnout. *American Politics Research*, 33, 842–867.
- Gerber, A. S., Green, D. P., & Shachar, R. (2003). Voting may be habit-forming: Evidence from a randomized field experiment. *American Journal of Political Science*, 47, 540–550.
- Gimpel, J. G., Dyck, J. J., & Shaw, D. R. (2006). Location, knowledge and time pressures in the spatial structure of convenience voting. *Electoral Studies*, 25, 35–58.
- Gimpel, J. G., & Schuknecht, J. E. (2003). Political participation and the accessibility of the ballot box. *Political Geography*, 22, 471–488.
- Grofman, B., & Liphart, A. (Eds.). (1986). *Electoral laws & their political consequences*. New York: Agathon Press.
- Gronke, P. (2008). Early voting reforms and American elections. *William & Mary Bill of Rights Journal*, 17, 423–451.
- Gronke, P., & Miller, P. (2012). Voting by mail and turnout in Oregon: Revisiting Southwell and Burchett. *American Politics Research*, 40, 976–997.
- Hanmer, M. J., & Traugott, M. W. (2004). The impact of voting by mail on voter behavior. *American Politics Research*, 32, 375–405.
- Hasen, R. L. (2012). *The voting wars: From Florida 2000 to the next election meltdown*. New Haven: Yale University Press.
- Haspel, M., & Knotts, H. G. (2005). Location, location, location: Precinct placement and the costs of voting. *Journal of Politics*, 67, 560–573.
- Herron, M. C., & Daniel A. S. 2016. Race, Shelby County, and the voter information verification act in North Carolina. *Florida State University Law Review*.
- Herron, M. C., & Smith, D. A. (2012). Souls to the polls: Early voting in Florida in the shadow of house bill 1355. *Election Law Journal*, 11, 331–347.
- Herron, M. C., & Smith, D. A. (2013). House bill 1355 and voter registration in Florida. *State Politics and Policy Quarterly*, 13, 279–305.
- Herron, M. C., & Smith, D. A. (2014). Race, party, and the consequences of restricting early voting in Florida in the 2012 general election. *Political Research Quarterly*, 67, 646–665.
- Hicks, W. D., et al. (2015). A principle or a strategy? Voter identification laws and partisan competition in the American States. *Political Research Quarterly*, 68, 18–33.
- Iacus, S. M., Gary K., & Giuseppe P. 2008. Matching for causal inference without balance checking. doi:10.2139/ssrn.1152391.
- Kennedy, S. 2014. Plan to t 30 manatee county polling locations fuels outcry. *Bradenton Herald*. 11 February. Available: http://www.huffingtonpost.com/2014/02/11/florida-polling-locations_n_4765982.html.
- Kimball, D., Kropf, M., & Battles, L. (2006). Helping America vote? Election administration, partisanship, and provisional voting in the 2004 election. *Election Law Journal*, 5, 447–461.
- Levendusky, M. (2009). *The partisan sort: How liberals became democrats and conservatives became republicans*. Chicago: University of Chicago Press.
- McDonald, M. P. 2009. The return of the voter: Voter turnout in the 2008 presidential election. *The Forum* 6: Article 4.
- Neeley, G. W., & Richardson, L. R. (2001). Who is early voting? An individual level examination. *Social Science Journal*, 38, 381–392.
- Norris, P. (2004). *Electoral engineering: Voting rules and political behavior*. New York: Cambridge University Press.
- Plutzer, E. (2002). Becoming a habitual voter: Inertia, resources, and growth in young adulthood. *American Political Science Review*, 96, 41–56.
- Riker, W. H., & Ordeshook, P. C. (1968). A theory of the calculus of voting. *American Political Science Review*, 62(01), 25–42.
- Scher, R. K. (2011). *The politics of disenfranchisement*. Armonk: M.E. Sharpe.
- Sharockman, A. 2011. Think we have it tough? In Africa, people walk up to 300 miles to vote, GOP senator says. *Politifact.com*. 6 May. Available: <http://www.politifact.com/florida/statements/2011/may/06/mike-bennett/think-we-have-it-tough-africa-people-walk-300-mile/>.
- Southwell, P. L., & Burchett, J. I. (2000). The effect of all-mail elections on voter turnout. *American Politics Quarterly*, 28, 72–79.
- Stein, R. M. (1998). Early voting. *Public Opinion Quarterly*, 62, 57–69.
- Stein, R. M., Jan L., & Christopher O. 2005. Who votes, who doesn't, why and, what can be done? A report to the Federal Commission on Electoral Reform.

- Stein, R. M. & Andrew M. 2014. The evolving modes of voting: How voters choose when and where to vote. *Midwest Political Science Association*, April 3–6, Chicago.
- Stein, R. M., & Vonnahme, G. (2010). Voting early but not often enough. In J. E. Leighley (Ed.), *The Oxford handbook of American elections and political behavior* (pp. 182–199). New York: Oxford University Press.
- Streb, M. (Ed.). (2012). *Law and election politics: The Rules of the game* (2nd ed.). New York: Routledge.
- Thomson, R. 2012. Tell the Truth, Screw the Politics. *Business Observer Florida*. 11 May. Available: <http://www.businessobserverfl.com/print/tell-the-truth-screw-the-politics/>.
- Wallace, J. 2012. Dent Shrinking Number of Voting Precincts. *Sarasota Herald-Tribune*. 6 May. Available: <http://politics.heraldtribune.com/2012/05/06/dent-shrinking-number-of-voting-precincts/>.
- Wang, T. A. (2012). *The politics of voter suppression: Defending and expanding Americans' right to vote*. Ithaca: Cornell University Press.
- Wolfinger, R., & Rosenstone, S. (1980). *Who votes?*. New Haven: Yale University Press.

DEFENDANTS' EX. 5

GEORGIA SECRETARY OF STATE ROBYN A. CRITTENDEN

GENERAL ELECTION

Official Results



STATE OFFICES

STATEWIDE OFFICES

Governor

Counties/Precincts Reporting: **100 %**

Percentage

Votes

BRIAN KEMP (REP)

50.22%

1,978,408

STACEY ABRAMS (DEM)

48.83%

1,923,685

TED METZ (LIB)

0.95%

37,235

3,939,328

Lieutenant Governor

Counties/Precincts Reporting: **100 %**

Percentage

Votes

GEOFF DUNCAN (REP)

51.63%

1,951,738

SARAH RIGGS AMICO (DEM)

48.37%

1,828,566

3,780,304

Secretary Of State

Counties/Precincts Reporting: **100 %**

Percentage

Votes

BRAD RAFFENSPERGER (REP)

49.09%

1,906,588

JOHN BARROW (DEM)

48.67%

1,890,310


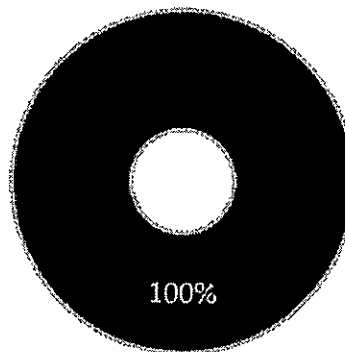
SMYTHE DUVAL (LIB)

2.23%

86,696

3,883,594

Counties/Precincts Reporting

 Completely Reported Not Reporting Partially Reported

COUNTIES COMPLETE 159/159

PRECINCTS COMPLETE 2634/2634

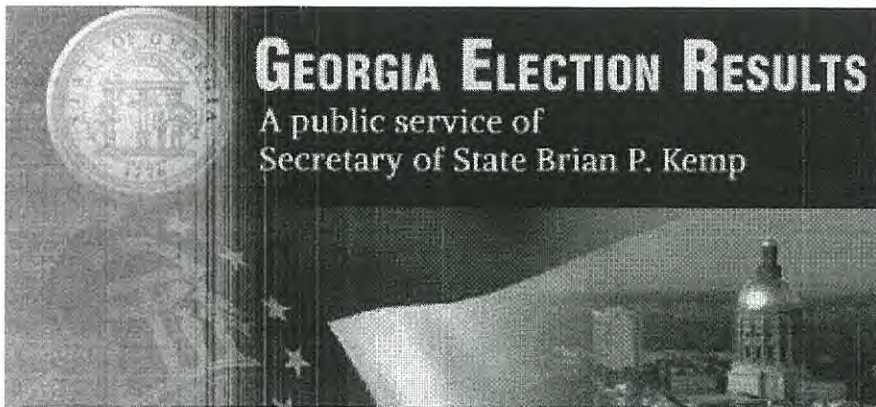
Voter Turnout

TOTAL 61.44%

Ballots Cast 3,949,905

Registered Voters 6,428,581

DEFENDANTS' EX. 6



[Statewide Results](#)
General Election
November 8, 2016

Website last updated 12/1/2016 2:06:22 PM EST

[Results by County](#)

Registered Voters: 5,443,046

Ballots Cast: 4,165,405

Voter Turnout: 76.53 %

Counties Partially Reported: 0 of 159
Counties Completely Reported: 159 of 159

OFFICIAL RESULTS
Provisional ballots are included

[Customize My Search](#)
(299 of 299)



Go To Page Display

President of the United States

159 of 159 Counties Reporting

| | Percent | Votes |
|-----------------------|---------|-----------|
| DONALD J. TRUMP (REP) | 51.05% | 2,089,104 |
| HILLARY CLINTON (DEM) | 45.89% | 1,877,963 |
| GARY JOHNSON (LIB) | 3.06% | 125,306 |
| | | 4,092,373 |

United States Senator, Isakson

159 of 159 Counties Reporting

| | Percent | Votes |
|--------------------------|---------|-----------|
| JOHNNY ISAKSON (I) (REP) | 54.80% | 2,135,806 |
| JIM BARKSDALE (DEM) | 41.04% | 1,599,726 |
| ALLEN BUCKLEY (LIB) | 4.16% | 162,260 |
| | | 3,897,792 |

Public Service Commission, District 2 - Eastern

159 of 159 Counties Reporting

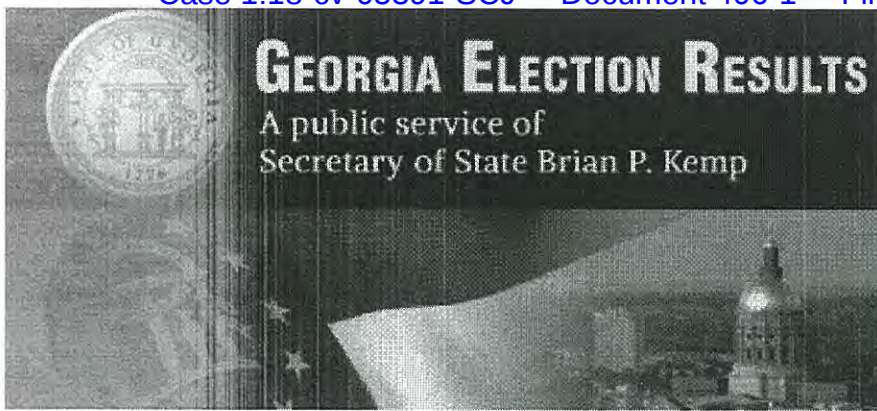
| | Percent | Votes |
|----------------------|---------|-----------|
| TIM ECHOLS (I) (REP) | 66.58% | 2,390,836 |
| ERIC HOSKINS (LIB) | 33.42% | 1,200,076 |
| | | 3,590,912 |

U.S. Representative, District 1

17 of 17 Counties Reporting

| | Percent | Votes |
|-------------------------------|---------|---------|
| EARL "BUDDY" CARTER (I) (REP) | 100.00% | 210,243 |
| | | 210,243 |

DEFENDANTS' EX. 7



[Statewide Results](#)
General Election
November 4, 2014

Website last updated 11/10/2014 6:56:24 PM EST

[Results by County](#)

Registered Voters: 5,191,182
Ballots Cast: 2,596,947
Voter Turnout: 50.03 %

Counties Partially Reported: 0 of 159
Counties Completely Reported: 159 of 159
Counties Percent Reported: 100.00 %

OFFICIAL RESULTS
 Provisional ballots included

[Customize My Search](#)
 (272 of 272)



Go To Page Display

United States Senator, Chambliss

159 of 159 Counties Reporting

| | Percent | Votes |
|------------------------|---------|-----------|
| DAVID A. PERDUE (R) | 52.89% | 1,358,088 |
| M. MICHELLE NUNN (D) | 45.21% | 1,160,811 |
| AMANDA C. SWAFFORD (L) | 1.90% | 48,862 |
| | | 2,567,761 |

Governor

159 of 159 Counties Reporting

| | Percent | Votes |
|---------------------|---------|-----------|
| J. NATHAN DEAL (I)R | 52.75% | 1,345,237 |
| JASON J. CARTER (D) | 44.89% | 1,144,794 |
| ANDREW T. HUNT (L) | 2.36% | 60,185 |
| | | 2,550,216 |

Lieutenant Governor

159 of 159 Counties Reporting

| | Percent | Votes |
|--------------------------|---------|-----------|
| L. S. 'CASEY' CAGLE (I)R | 57.99% | 1,466,505 |
| CONNIE J. STOKES (D) | 42.01% | 1,062,557 |
| | | 2,529,062 |

Secretary Of State

159 of 159 Counties Reporting

| | Percent | Votes |
|--------------------|---------|-----------|
| BRIAN P. KEMP (I)R | 57.47% | 1,452,554 |
| DOREEN CARTER (D) | 42.53% | 1,075,101 |
| | | 2,527,655 |

DEFENDANTS' EX. 8



Democracy Diverted

Polling Place Closures and the Right to Vote

September 2019

VOTE HERE

VOTE AQUÍ

在此投票

PENGAD-Bayonne, N.J.

EXHIBIT

8

2/26/20 DG

Acknowledgments

Democracy Diverted: Polling Place Closures and the Right to Vote is a product of The Leadership Conference Education Fund.

The Education Fund was founded in 1969 as the education and research arm of The Leadership Conference on Civil and Human Rights, the nation's oldest and largest civil and human rights coalition of more than 200 national organizations. Because of our unique role in leading coalitions, we are able to create public education campaigns that leverage a range of diverse voices to empower and mobilize advocates at the local, state, and federal levels. For five decades, we have served as a force multiplier and amplified the call for a just, inclusive, and fair democracy. At The Education Fund, we believe an informed public is not only necessary to achieve civil and human rights, but also to make sure those rights endure. By activating the power of the coalition, The Education Fund and our partners can share innovative research and information around the country — and ultimately, shift the narrative on civil and human rights.

Leigh Chapman, Caitlin Hatakeyama, Ashley Lawrence, Tyler Lewis, Scott Simpson, and Jiayu Wang provided staff and consultant assistance under the supervision of LaShawn Warren and Ashley Allison.

We would like to thank the following advocates for providing invaluable advice and wisdom during the creation of this report:

- Alex Gulotta, The Leadership Conference Education Fund, All Voting is Local, Arizona
- Brad Ashwell, The Leadership Conference Education Fund, All Voting is Local, Florida
- Hannah Fried, The Leadership Conference Education Fund, All Voting is Local, National
- Dr. Megan Gall, The Leadership Conference Education Fund, All Voting is Local, National
- Leah Aden, NAACP Legal Defense and Educational Fund, Inc.
- Michelle Bishop, National Disability Rights Network
- Brett Bursey, SC Progressive Network
- Erika Hudson, National Disability Rights Network
- Chris Ketchie, Southern Coalition for Social Justice
- Natalie Landreth, Native American Rights Fund
- Liza McClenaghan, Common Cause Florida
- Allison Riggs, Southern Coalition for Social Justice
- Beth Stevens, Texas Civil Rights Project
- James Tucker, Wilson Elser Moskowitz Edelman & Dicker, LLP
- Sean Young, ACLU of Georgia

Report design by Lindsey Montague and Natalie Goffney.

Table of Contents

| | |
|-----------|---|
| 4 | Introduction |
| 12 | Summary of National Findings <ul style="list-style-type: none">→ The Nation's Megaclosers→ Out of Sight, Out of Mind→ Vote Centers: The Jury Is Out |
| 25 | States in Focus <ul style="list-style-type: none">→ Texas→ Arizona→ Georgia→ Louisiana→ Mississippi→ Alabama→ North Carolina |
| 43 | Blaming Voters with Disabilities |
| 48 | School Safety: No Excuse to Deny Voting Rights |
| 51 | Best Practices |
| 52 | Conclusion |
| 53 | Methodology |
| 56 | Appendix: Data Set for All Included Counties |



Introduction

The Voting Rights Act of 1965 (VRA), a landmark achievement of the civil rights movement, is known as one of the most effective civil rights laws in American history. Years of struggle for the right to vote culminated in Bloody Sunday, the infamous day in 1965 when civil rights advocates, including U.S. Rep. John Lewis, were brutally beaten as they marched across the Edmund Pettus Bridge in Selma, Alabama, to demand equal access to the ballot box — a pivotal moment in the campaign for civil rights that led to the enactment of the VRA months later. Before the VRA, Black voters were prevented from participating in the political system due to literacy tests, poll taxes, voter intimidation tactics, and violence. In the mid-1950s, only 25 percent of African Americans were registered to vote, and the registration rate was even lower in some states. In Mississippi, for example, fewer than 5 percent of African Americans were registered to vote.¹ Those rates rose quickly after the VRA was enacted. By 1970, almost as many African Americans were registered to vote in Alabama, Mississippi, Georgia, Louisiana, North Carolina, and South Carolina as had been in the entire century before 1965.² Like African Americans, Native Americans, Latinos, and Asian Americans have also faced voter discrimination and low voter registration rates. It wasn't until 1975, when Congress amended the VRA, that certain jurisdictions were required to provide bilingual election materials and voting assistance.³

¹ See U.S. COMM'N ON CIVIL RIGHTS, AN ASSESSMENT OF MINORITY VOTING RIGHTS ACCESS IN THE UNITED STATES 171 (2018), https://www.usccr.gov/pubs/2018/Minority_Voting_Access_2018.pdf

² See *Shelby Cty. v. Holder*, 570 U.S. 529, 562 (2013) (Ginsburg, J., dissenting).

³ See U.S. COMM'N ON CIVIL RIGHTS, AN ASSESSMENT OF MINORITY VOTING RIGHTS ACCESS IN THE UNITED STATES 34 (2018), https://www.usccr.gov/pubs/2018/Minority_Voting_Access_2018.pdf

The Heart of the Voting Rights Act

Often described as the “heart” of the VRA, Section 5⁴ played a critical role in dismantling the systemic discrimination against voters of color that was prevalent throughout the South. This section, also known as the preclearance provision, allowed the U.S. Department of Justice (DOJ) and the U.S. District Court for the District of Columbia to block states and localities (*i.e.*, “covered jurisdictions”⁵) with a history of discrimination from implementing voting changes that could disenfranchise voters of color. In enacting Section 5, “Congress had found that case-by-case litigation was inadequate to combat widespread and persistent discrimination in voting, because of the inordinate amount of time and energy required to overcome the obstructionist tactics invariably encountered in these lawsuits. After enduring nearly a century of systematic resistance to the Fifteenth Amendment, Congress ... decide[d] to shift the advantage of time and inertia from the perpetrators of the evil to its victims.”⁶ Section 5 guaranteed that voting changes were public, transparent, analyzed, and evaluated before they were implemented, ensuring they would not discriminate against voters on the basis of race or language. While the VRA applies to the entire country, Section 5 was reserved for jurisdictions with the most pervasive patterns of discrimination: Alabama, Alaska, Arizona, Georgia, Louisiana, Mississippi, South Carolina, Texas, and Virginia. A selection of counties in California, Florida, Michigan, New York, North Carolina, and South Dakota were also covered and were required to submit their voting changes for approval.⁷ In addition to its preventive powers, preclearance deterred state and local jurisdictions from suppressing the voting power of growing communities of color.

⁴ Under Section 5 of the VRA, jurisdictions with a demonstrated record of racial discrimination in voting were required to submit all proposed voting changes to the U.S. Department of Justice or the U.S. District Court in Washington, D.C., for “preclearance” in advance of implementation. The jurisdictions were required to prove that the proposed voting change would not deny or adversely affect the right to vote on the basis of race, color, or an eligible voter’s membership in a language minority group. Preclearance was a crucial element of the VRA because it ensured that no new voting law or practice, such as closing or moving a polling place, would be implemented in a place with a history of racial discrimination in voting unless that law was first determined not to discriminate against voters of color. However, in *Shelby*, the U.S. Supreme Court invalidated the formula that determined which states and jurisdictions are covered by Section 5 of the VRA and thus are required to undergo preclearance. Without that determination, the preclearance provision essentially became inoperable.

⁵ States and localities required to submit their voting changes for federal approval were: Alabama, Alaska, Arizona, Georgia, Louisiana, Mississippi, South Carolina, Texas, and Virginia, and counties in California, Florida, Michigan, New York, North Carolina, and South Dakota. Counties and townships in a few other states were removed from coverage through the “bailout” provision in Section 4(a) of the VRA.

⁶ *South Carolina v. Katzenbach*, 383 U.S. 301, 328 (1966).

⁷ See Jurisdictions Previously Covered by Section 5, U.S. DEP’T OF JUSTICE CIVIL RIGHTS DIV., <https://www.justice.gov/crt/jurisdictions-previously-covered-section-5> (last updated Aug. 6, 2015).

Shelby County v. Holder's Devastating Impact

Despite the VRA's success in combating voting discrimination, the U.S. Supreme Court struck down its coverage formula in *Shelby County v. Holder* in 2013. In so doing, justices rendered the VRA's most powerful provision — the Section 5 preclearance system — inoperable, opening the door to racial discrimination across the country at every juncture of the electoral process. At the time, Justice Ruth Bader Ginsburg foresaw the devastating impact the loss of preclearance would have on voting rights in communities of color. “Throwing out preclearance when it has worked and is continuing to work to stop discriminatory changes is like throwing away your umbrella in a rainstorm because you are not getting wet,”⁸ she wrote in her dissenting opinion.

Since *Shelby*, a growing number of states and localities across the country have attempted to suppress voter participation among Black and Brown communities in various ways. States have shortened voting hours and days, enacted new barriers to voter registration, purged millions of eligible voters from the rolls, implemented strict voter identification laws, reshaped voting districts, and closed polling places. Many of these changes have been found to discriminate against Black and Brown voters.⁹ Courts have, in fact, found intentional discrimination in at least 10 voting rights decisions since *Shelby*.¹⁰ In 2016, the U.S. Court of Appeals for the Fourth Circuit described North Carolina's voter ID law as “the most restrictive voting law North Carolina has seen since the era of Jim Crow” and said its provisions “target African Americans with almost surgical precision.”¹¹ And in 2017, a federal court ruled that Texas' 2013 congressional redistricting maps were enacted with “racially discriminatory intent” against Latino and Black voters.¹²

**Since *Shelby*,
a growing
number of states
and localities
across the
country have
attempted to
suppress voter
participation.**

⁸ See *Shelby Cty. v. Holder*, 570 U.S. 529, 590 (2013) (Ginsburg, J., dissenting).

⁹ See generally, N.C. State Conf. of the NAACP v. McCrory, 831 F.3d 204, 214 (4th Cir. 2016); *Perez v. Abbott*, 274 F. Supp. 3d 624, 652, 686 (W.D. Tex. 2017).

¹⁰ Letter from Sherrilyn Ifill, President & Dir. Counsel, NAACP Legal Def. Fund, to Bob Goodlatte, Chair, U.S. House Comm. on the Judiciary (Sep. 7, 2017) (on file with author).

¹¹ N.C. State Conf. of the NAACP v. McCrory, 831 F.3d 204, 214 (4th Cir. 2016).

¹² See *Perez v. Abbott*, 274 F. Supp. 3d 624, 652, 686 (W.D. Tex. 2017).

The absence of Section 5 has made it increasingly difficult to identify harmful voting changes before they take effect because states and localities are no longer required to notify federal officials of changes to voting laws. To track discrimination against voters of color, advocates need a fine-grained understanding of changing electoral processes in states and localities across the nation, especially in those with histories of discrimination. In the absence of Section 5, they no longer have the means of achieving that knowledge. Section 5's prophylactic power came from its recognition that the "harms" of voting discrimination can never be truly redressed. Once an election is held, there is no do-over.

The wave of voter suppression since *Shelby* suggests that restoring the VRA and erecting additional safeguards to protect voters from racial discrimination must be a top legislative priority. When Congress wrote and passed the VRA, it understood that racial discrimination in voting morphs and changes over time; hence, the creation of Section 5. The myriad tactics now used to restrict electoral participation are just as pernicious as the poll taxes and literacy taxes of the 20th century. Congress can — and must — address this problem by restoring and strengthening the VRA.

Congress can — and must — address this problem by restoring and strengthening the VRA.

Rise in Polling Place Closures Since *Shelby*

The national media have focused on discriminatory changes in voting policy and practice, such as the increase in photo identification requirements, purges from voting rolls, and reductions in rates of early voting. Yet poll closures have received little attention, even though they are a common and particularly pernicious way to disenfranchise voters of color. Decisions to shutter or reduce voting locations are often made quietly and at the last minute, making pre-election intervention or litigation virtually impossible. Closing polling places has a cascading effect, leading to long lines at other polling places, transportation hurdles, denial of language assistance and other forms of in-person help, and mass confusion about where eligible voters may cast their ballot. For many people, and particularly for voters of color, older voters, rural voters, and voters with disabilities, these burdens make it harder — and sometimes impossible — to vote.

Before *Shelby*:

States and localities were required to notify voters of any planned polling place closures well ahead of time. State and local officials were also required to prove that proposed voting changes would not have a discriminatory effect on Black, Latino, Asian American, or Native American voters, and they were required to give the DOJ data from the U.S. Census Bureau about the racial impact of polling closures.¹³ The DOJ would then reach out to the community to obtain information about the impact of the proposed voting change.¹⁴

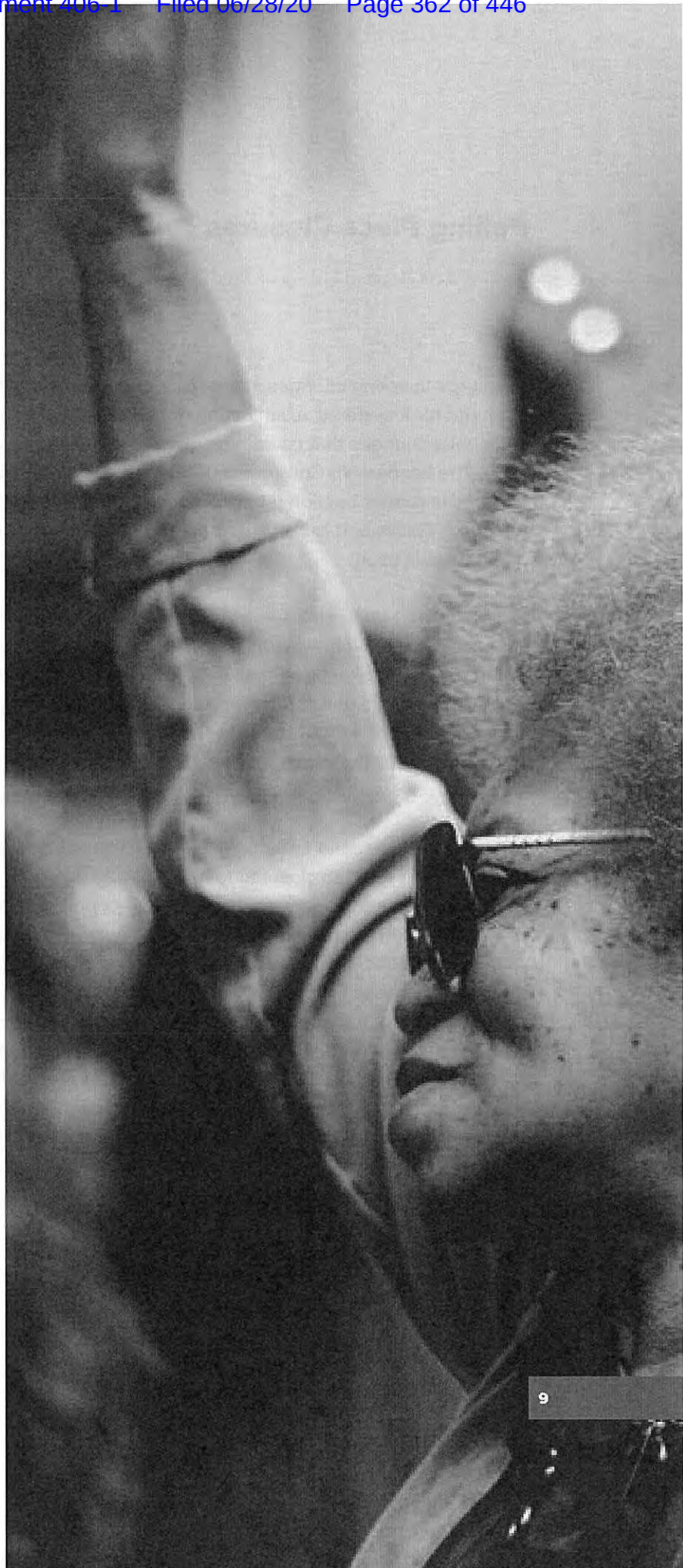
Since *Shelby*:

Jurisdictions are no longer required to notify voters of changes, and the DOJ does not have to analyze the impact of proposed voting changes on communities of color in Section 5 jurisdictions. To identify potentially discriminatory polling place relocations or closures and precinct changes, voters now must rely on reports from the news media, social media, and/or local advocates who attend city and county commission meetings or legislative sessions where these changes are made. In most cases, closures go unnoticed, unreported, and unchallenged.

¹³ See U.S. COMM'N ON CIVIL RIGHTS, AN ASSESSMENT OF MINORITY VOTING RIGHTS ACCESS IN THE UNITED STATES 169 (2018), https://www.usccr.gov/pubs/2018/Minority_Voting_Access_2018.pdf

¹⁴ See U.S. COMM'N ON CIVIL RIGHTS, AN ASSESSMENT OF MINORITY VOTING RIGHTS ACCESS IN THE UNITED STATES 47 (2018), https://www.usccr.gov/pubs/2018/Minority_Voting_Access_2018.pdf

While all poll closures do not prove discrimination, they merit heightened scrutiny, given this country's sordid history of excluding voters of color from the political process. Context matters. There may be legitimate reasons to reduce the number of polling places, perhaps because of a population decrease or reduced demand for Election Day voting because of increases in early or mail-in voting. When polling place reductions are planned in concert with diverse communities, evaluated in advance to ensure they won't harm voters of color, and take place with clear notice and transparency, they can be implemented equitably. Before *Shelby*, states and localities with clear records of voter discrimination — like those discussed in this report — were required to take these steps when consolidating polling places. Today, they are not.



Polling Place Closures Today

The surge in voting changes at the state and local level after *Shelby* catalyzed the need for a systemic examination of poll closures and other seemingly innocuous changes that could have negatively impacted voters of color. In 2016, The Leadership Conference Education Fund identified 868 polling place closures in former Section 5 jurisdictions in our initial report, *The Great Poll Closure*.¹⁵ This report is both an update to — and a major expansion of — our original publication.

Our first report drew on a sample of fewer than half of the approximately 860 counties or county-equivalents that were once covered by Section 5. This report covers an expanded data set of 757 counties. What's more, *The Great Poll Closure* relied on voluntary reports of aggregate numbers of polling places that state election officials gave to the U.S. Election Assistance Commission. This report relies largely on independent counts of polling places from public records requests and publicly available polling place lists.

In this report, we found 1,688 polling place closures between 2012 and 2018, almost double the 868 closures found in our 2016 report. Additionally, *Democracy Diverted* analyzes the reduction of polling places in the formerly covered Section 5 jurisdictions in the years between the 2014 and 2018 midterm elections. We found 1,173 fewer polling places in 2018 — despite a significant increase in voter turnout. To better understand the potentially discriminatory impact of these closures, additional analysis beyond what is included in this report must be completed at the precinct level. This analysis — precisely the kind that the DOJ conducted under preclearance — takes time and resources. Our hope is that journalists, advocates, and voters will use this county-level polling place data to scrutinize the impact of poll closures in their communities, to understand their impact on voters of color, and to create a fairer and more just electoral system for all.

¹⁵ See THE LEADERSHIP CONFERENCE EDUCATION FUND, *THE GREAT POLL CLOSURE 7* (Nov. 2016), <http://civilrightsdocs.info/pdf/reports/2016/poll-closure-report-web.pdf>.

Our hope is that journalists, advocates, and voters will use this county-level polling place data to scrutinize the impact of poll closures in their communities, to understand their impact on voters of color, and to create a fairer and more just electoral system for all.

Summary of Methodology

This report examines 757 (or nearly 90 percent) of the approximately 860 counties and county-level equivalents once covered by Section 5. Our sample includes only those jurisdictions where The Education Fund was able to acquire accurate polling place lists or counts from state or local election officials or reputable media sources for general elections in 2012, 2014, 2016, and/or 2018. Counties where we could not obtain reliable data (Virginia and three from Texas) were excluded from the analysis. More detail on methodology is available at the end of this report.

Summary of National Findings

We found 1,688 polling place closures in places once covered by Section 5 of the Voting Rights Act. Of the 757 counties in our study, 298 (39 percent) reduced the number of polling places between 2012 and 2018. Because presidential elections tend to have higher turnout rates than midterms, we analyzed the data to determine whether the number of polling places varied to meet the different demands of each type of election. They did not. Most (69 percent) closures (–1,173)¹⁶ occurred after the 2014 midterm election.

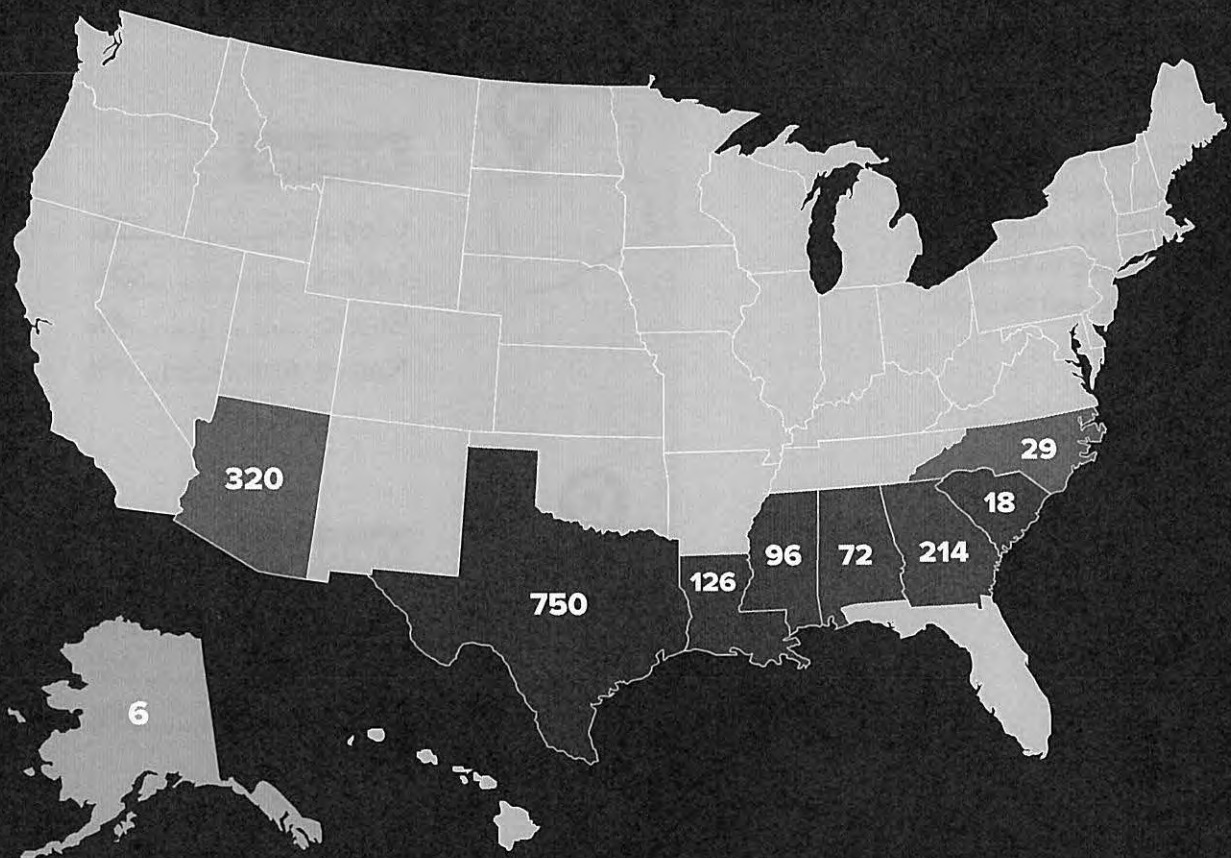
The *Shelby* decision paved the way for systematic statewide efforts to reduce the number of polling places in Texas (–750), Arizona (–320), and Georgia (–214). Quieter efforts to reduce the number of polling places without clear notice or justification spread throughout Louisiana (–126), Mississippi (–96), Alabama (–72), North Carolina (–29), and Alaska (–6).

Our analysis also found that South Carolina (–18) is unique among southern states in that it has state laws for polling place changes. Despite barriers to voting in other contexts, South Carolina has closed relatively few polling places since *Shelby*.

Though not inherently discriminatory, these polling place closures occurred in states and localities with past histories of racial discrimination in voting. And some took place amid a larger constellation of efforts to prevent voters of color from electing the candidates of their choice, such as enactment of stricter voter identification laws, restrictions on voter registration, and voter purges.

¹⁶ Throughout this report, we refer to polling place reductions using the minus sign (–).

Polling place closures since *Shelby*



The Nation’s Megaclosers

Our analysis uncovered statewide efforts to reduce polling places across Texas, Arizona, and Georgia — all states with rapidly growing and diversifying electorates. Each state stands out for the volume, scale, and breadth of its polling place closures.

The 10 counties that closed the most polling places by number are all located in Texas, Arizona, and Georgia.



Texas

Closures.....750
Latino.....39%
Black.....12%



Arizona

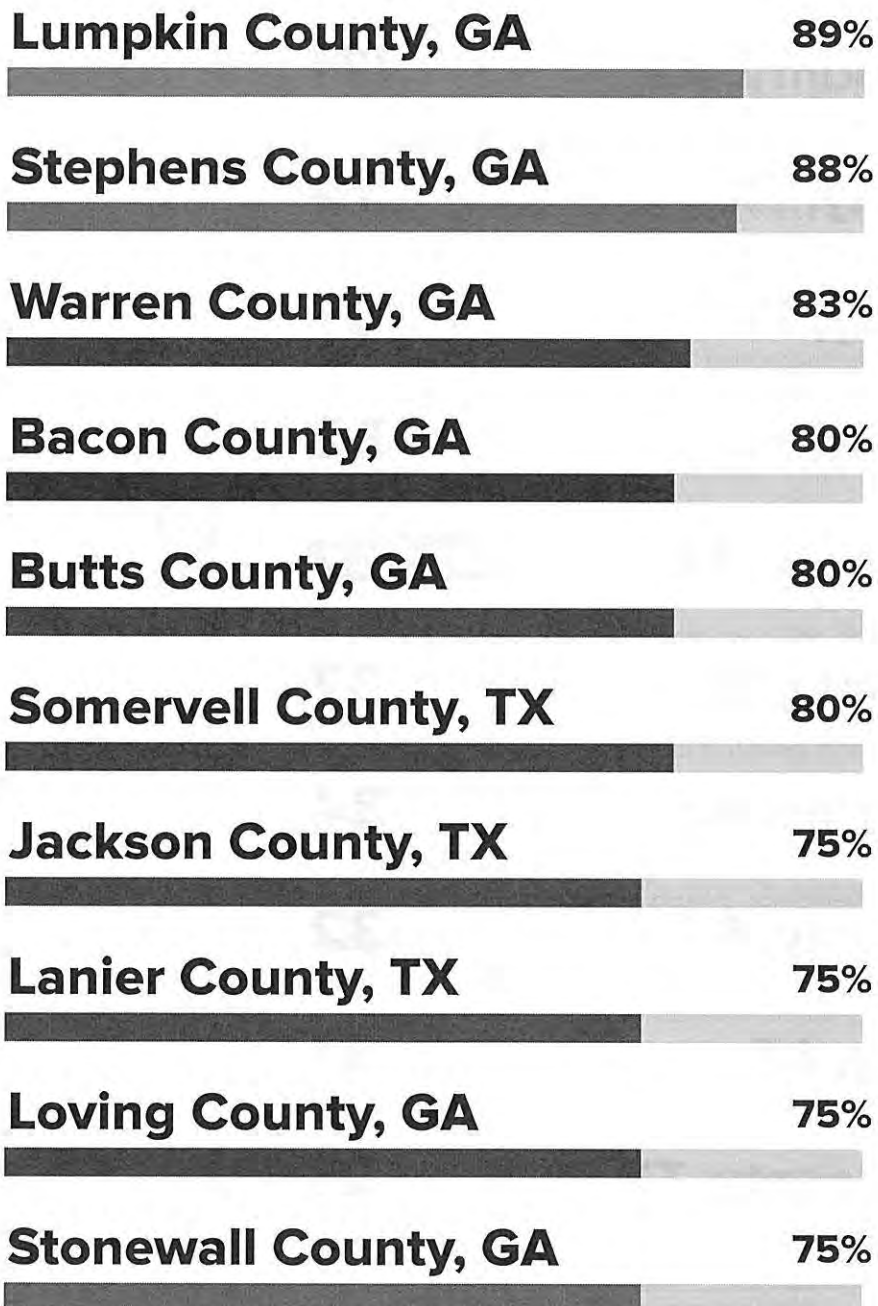
Closures.....320
Latino.....30%
Black.....4%
Native American....4%



Georgia

Closures.....214
Latino.....9%
Black.....31%

Top Ten Closers by Percentage





Georgia

Georgia, a state where 31 percent of the population is African American and 9 percent is Latino, has 214 fewer polling places.²¹ Georgia stands out because its counties have closed higher percentages of voting locations than any other state in our study. The top five closers of polling places by percentage were Georgia counties: The top three counties in the state were Lumpkin (89 percent closed); Stephens (88 percent closed); and Warren, which is 61 percent African American (83 percent closed). Bacon County, which is 15 percent African American, and Butts County, which is 28 percent African American, tied with 80 percent closed.²² Seven counties with major polling place reductions now have only one polling site to serve hundreds of square miles. In a February 2015 memo, the office of Brian Kemp, who was then serving as Georgia's secretary of state, encouraged counties to consolidate voting locations. He specifically spelled out twice — in bold font — that “as a result of the *Shelby vs. Holder* [sic] Supreme Court decision, [counties are] no longer required to submit polling place changes to the Department of Justice for preclearance.”²³

²¹ Georgia is 31 percent African American, 9 percent Latino, 1 percent Native American, and 4 percent Asian.

²² See 2013-2017 American Community Survey 5-Year Estimates, Table B03002, U.S. CENSUS BUREAU (2017), https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B03002&prodType=table.

²³ Memorandum from Ga. Sec'y of State Elections Div. to Ga. Local Election Officials 3, 5 (Feb. 2015) (on file with author).

Out of Sight, Out of Mind

..... +

Polling place closures in Louisiana, Mississippi, Alabama, and North Carolina follow a similarly troubling trend: Most took place out of public sight and were therefore out of the public's mind. Polling place closures happened largely without clear notice; transparency about how or why they were made; or approval from impacted voters or community stakeholders. In fact, news reports about polling place closures in all four states were often met with silence from elected officials. Many either did not respond to requests for comment;²⁴ responded but did not provide meaningful information;²⁵ or responded with false information.²⁶

By far, the most common justification for closing polling places was no justification at all. Local officials who did offer an explanation often cited pretexts, such as budget constraints, compliance with the Americans with Disabilities Act (ADA), school safety concerns, limited parking, changes in voter turnout, or even simple logic. As one election commissioner from Mississippi put it, sometimes closing polling places “just makes sense.”²⁷

²⁴ See Mary Sell, In Some Counties, Alabama Voters Have Lost a Quarter of Their Polling Places Since 2010, BIRMINGHAM WATCH (Nov. 2, 2018), <https://birminghamwatch.org/counties-alabama-voters-lost-quarter-polling-places-since-2010/>.

²⁵ See Charles Maldonado, Many New Orleans Voters are Still Driving Farther to Vote than Before Katrina, THE LENS (Nov. 8, 2016), <https://thelensnola.org/2016/11/08/many-new-orleans-voters-are-still-driving-farther-to-vote-than-before-katrina/>.

²⁶ See Anna Wolfe & Alex Rozier, Free From Federal Oversight, 5 Percent of Mississippi Polling Locations Have Closed Since 2013, MISS. TODAY (Oct. 24, 2018), <https://mississippitoday.org/2018/10/24/free-from-federal-oversight-5-percent-of-mississippi-polling-locations-have-closed-since-2013/>.

²⁷ See Anna Wolfe & Alex Rozier, Free From Federal Oversight, 5 Percent of Mississippi Polling Locations Have Closed Since 2013, MISS. TODAY (Oct. 24, 2018), <https://mississippitoday.org/2018/10/24/free-from-federal-oversight-5-percent-of-mississippi-polling-locations-have-closed-since-2013/>.





Louisiana

In Louisiana, two-thirds of all parishes closed polling places, leaving voters with 126 fewer places to vote than in 2012. The biggest closer was Jefferson Parish, which is 26 percent African American and 14 percent Latino. That parish first shuttered 23 voting locations in 2015 for lack of compliance with the ADA. Instead of making low-cost modifications or relocating those polling places in subsequent elections, the parish shuttered two more in advance of the 2018 election — a deeply troubling trend in a parish with an established record of hostility toward voting rights.²⁸ Equally concerning, voters in East Baton Rouge Parish, which is split about evenly between Black and White voters, have lost 10 polling places since 2012. Initially, many closures were said to be a temporary response to emergency flooding in 2016.²⁹ But years later, these polling places have yet to reopen. That follows a troubling trend that began in Orleans Parish, which has yet to restore many of the polling places that were closed in 2005 in the aftermath of Hurricane Katrina.



Mississippi

In Mississippi, a state where more than one-third (37 percent) of the population is African American,³⁰ the number of polling places has dropped by 96 since 2012, with closures spread among 31 of the state's 82 counties. Harrison County, which is about one-quarter (24 percent) African American, and Pearl River County, which is 13 percent African American, were the largest closers in the state — each closing 13 polling places. The cuts would have been much worse in Pearl River had it not been for community pushback to a 2017 plan to slash the number of voting locations from 33 to 12. After months of negotiation, officials agreed to a compromise plan to move forward and keep 20 polling places open.

²⁸ See U.S. COMM'N ON CIVIL RIGHTS, AN ASSESSMENT OF MINORITY VOTING RIGHTS ACCESS IN THE UNITED STATES 171 (2018), https://www.usccr.gov/pubs/2018/Minority_Voting_Access_2018.pdf.

²⁹ See Kevin Dupuy, Temporary Voting Locations Approved for EBR Precincts, WBRZ (Oct. 10, 2016 3:15PM), <http://www.wbrz.com/news/temporary-voting-locations-approved-for-ebz-precincts>.

³⁰ Mississippi is 37 percent African American, 3 percent Latino, 1 percent Asian American, and .4 percent Native American.



Alabama

Alabama, a state where more than a quarter (26 percent) of the population is African American,³¹ now has 72 fewer polling places after 23 counties reduced voting locations.³² These closures did not receive much media coverage, leaving voters with little information about why local polling places were closed. Those few news stories that were published, on the other hand, caused confusion. County officials, for example, claimed that they reduced polling places because there were too many voters³³ and cited nonexistent state laws as justification for requiring the removal of polling places from schools.³⁴



North Carolina

Voters in North Carolina, where more than one-fifth (21 percent) of the population is African American,³⁵ also have less access to polling stations. The 40 counties once covered by Section 5 of the VRA now have 29 fewer voting locations than they had before *Shelby*.³⁶ The vast majority of these reductions occurred under the proverbial cover of darkness — without any notice or reporting from the news media. They are especially concerning because majority-White counties voted to shutter voting locations with significant Black populations over the vocal objections of local civil rights groups. The Pasquotank County Board of Elections, for example, shuttered half of the polling places in Elizabeth City — a majority-Black community — without public input and over the objections of the local NAACP branch. The consolidation was undertaken in 2015 in the name of saving money, yet no polling places were eliminated in other parts of the county.

³¹ Alabama is 26 percent African American, 4 percent Latino, 1.2 percent Asian American, and .4 percent Native American.

³² See 2013-2017 American Community Survey 5-Year Estimates, Table B03002, U.S. CENSUS BUREAU (2017), https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B03002&prodType=table.

³³ See Mary Sell, In Some Counties, Alabama Voters Have Lost a Quarter of Their Polling Places Since 2010, BIRMINGHAM WATCH (Nov. 2, 2018), <https://birminghamwatch.org/counties-alabama-voters-lost-quarter-polling-places-since-2010/>.

³⁴ See Donna Thornton, Possible Changes in District 2 Polls Bring Opposition, GADSDEN MESSENGER (Sep. 6, 2013), <https://gadsdenmessenger.com/2013/09/06/possible-changes-in-district-2-polls-bring-opposition/>.

³⁵ North Carolina is 21 percent African American, 9 percent Latino, 1 percent Native American and 3 percent Asian.

³⁶ See 2013-2017 American Community Survey 5-Year Estimates, Table B03002, U.S. CENSUS BUREAU (2017), https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B03002&prodType=table.



Alaska

In Alaska, where 14 percent of the population is Native American,³⁷ six of the 390 polling places open in 2012 have been closed. In a state stretching over more than 660,000 square miles, every polling place matters. In many locations, one polling place serves an entire town; yet there is little to no public documentation of why any of these polling places were closed. When the only polling place serving an entire community is closed, every voter is impacted. In the absence of Section 5, the time-consuming and expensive process of litigation is often the only tool voters have to stop polling place closures.

Once under Section 5 preclearance on account of its efforts to disenfranchise Alaska Natives, the state has had recent problems with voting rights. In 2013, it settled a legal challenge from several voters and tribes for failing to meet its obligations under the VRA to provide language-accessible materials for voters with limited proficiency in English. While Section 5 was in effect, the DOJ blocked state efforts to close polling places in rural areas (which were being carried out under the guise of euphemisms like “consolidation” and “realignment”). Thanks to the work of the Alaska Federation of Natives, 176 rural villages now have absentee-in-person voting rights, which are vital in a state as large as Alaska.³⁸

³⁷ Alaska is 14 percent Native American, 3 percent African American, 7 percent Latino and 6 percent Asian.

³⁸ See Villages Across the State Register to Become Absentee Early Voting Sites, ALASKA FED’N OF NATIVES, <https://www.nativafederation.org/2014/07/villages-across-the-state-register-to-become-absentee-early-voting-sites/> (last visited Aug. 8, 2019).

Vote Centers: The Jury Is Out

One reason why Texas and Arizona closed so many polling places is because they converted to the “vote center” model of voting. Under this model, voters are not assigned to specific polling places; instead, they can cast ballots at the polling place of their choosing. While generally intended to enhance access to voting locations, this model often leads to massive reductions in polling places.

Arizona and Texas are the only two states formerly covered by Section 5 that have adopted clear programs to convert to the vote center model. In both states, many counties aggressively reduced voting locations immediately after *Shelby*. Without Section 5, racial impact analyses are no longer conducted to fully assess the impact of vote centers on Black, Latino, Native American, and Asian American voters.

Vote Centers in Arizona

In 2014, Graham County, which is 33 percent Latino and 13 percent Native American, closed half of its polling places when it converted to vote centers.³⁹ In 2012, Graham had 18 polling sites; today, it has half that — six vote centers and three precincts. Cochise County, which is 35 percent Latino, closed nearly two-thirds (65 percent) of its polling places when it converted to vote centers, falling from 49 in 2012 to 17 in 2018. Gila County, which is 16 percent Native American and 19 percent Latino, closed almost half of its polling places; it had 17 in 2018, down from 33 in 2012.⁴⁰

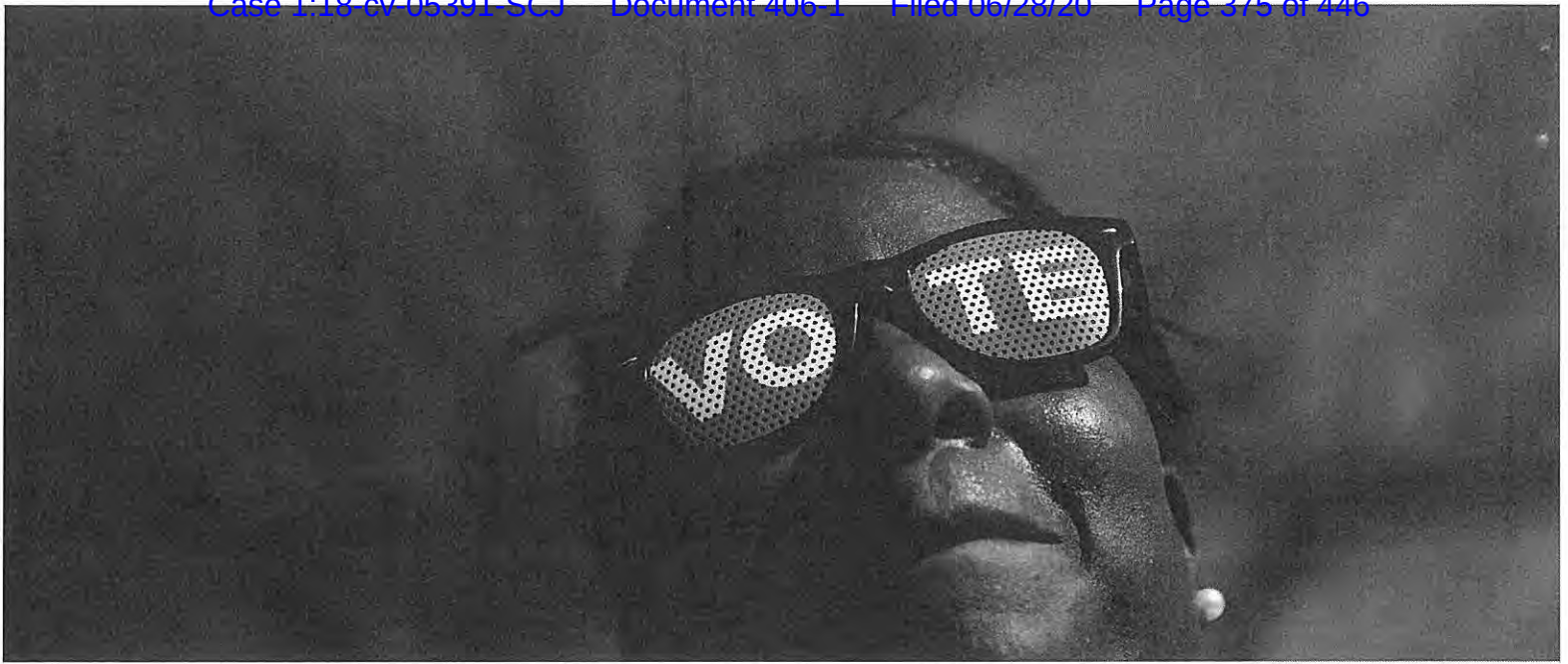
Many counties justify the transition to vote centers by rightly pointing out that the widespread adoption of vote-by-mail has diminished the need for physical polling places. Yet the state has given voters little in the way of explaining the process of voting, providing safeguards to protect voting rights, or making recommendations about how to transition to vote centers in ways that do not discriminate against voters of color or voters with limited English proficiency. State law gives counties broad leeway to implement vote centers as they see fit; as a result, some have converted entirely to vote centers, some have maintained traditional voting precincts, and others have adopted a hybrid model.⁴¹

Switching to vote centers doesn’t necessitate fewer polling places. Navajo County, which is almost half Native American and home to three Native American reservations, converted all of its polling places to vote centers while keeping almost every one of its voting locations open.

³⁹ See Jon Johnson, County Chooses Vote Centers Over Polling Precincts, E. ARIZ. COURIER (Jun. 9, 2014), https://www.earcourier.com/news/county-chooses-vote-centers-over-polling-precincts/article_32a76a5a-ee88-11e3-a42b-001a4bcf887a.html.

⁴⁰ See 2013-2017 American Community Survey 5-Year Estimates, Table B03002, U.S. CENSUS BUREAU (2017), https://factfinder.census.gov/faces/tableservices/sf/pages/productview.xhtml?pid=ACS_17_5YR_B03002&prodType=table.

⁴¹ See H.R. 2303, 50th Leg., 1st Reg. Sess. (Ariz. 2011).



Vote Centers in Texas

Unlike Arizona, Texas has a clear and established process for converting to vote centers. To apply to the Countywide Polling Place Program (CWPP), counties must document specific plans to meet program requirements. Though intended to make voting more efficient and convenient, this law allows counties to make deep and immediate cuts to polling places and has no required safeguards to protect voters of color from discrimination.

The state's process for converting to vote centers allows counties to close 35 percent of their polling places in their first election after conversion, and 50 percent in subsequent elections. The 60 counties that voluntarily participate in the program⁴² account for 24 percent of the Texas counties in our study but are responsible for about two-thirds of the state's polling place closures. While not all counties that participate in the program reduce the number of polling places, those that do are more than twice as likely to close polling places than counties that use the precinct model.

The CWPP encourages counties to ask voters of color about their thoughts on the changes — but does not require it. Nor does it require a racial impact analysis, which was required before *Shelby*. To enroll in the CWPP, counties must provide a transcript or recording of a public forum soliciting input from voters that includes “minority organizations” among other stakeholders. The state election office also “strongly encourages” counties to create advisory committees to provide feedback on voting locations so they don’t run afoul of the VRA. Each county is required to explain how it chose its voting locations, but discriminatory impact is not mentioned as a possible metric.⁴³

Though far from perfect, this limited and transparent process is better than no process at all. Massive reductions are still happening in the remaining 194 counties that haven’t converted to vote centers, and those consolidations are occurring with little oversight or transparency.

⁴² See Counties Approved to Use the Countywide Polling Place Program (CWPP) for the May 4, 2019 Uniform Election, TEX. SEC’Y OF STATE, <https://www.sos.state.tx.us/elections/laws/countywide-polling-place-program.shtml> (last visited Aug. 8, 2016).

⁴³ See TEX. SEC’Y OF STATE, DIR. OF ELECTIONS, ELECTION ADVISORY NO. 2019-01, 2019 OPPORTUNITIES TO USE COUNTYWIDE POLLING PLACES (Jan. 2, 2019), <https://www.sos.state.tx.us/elections/laws/advisory2019-01.shtml>.

An aerial, black-and-white photograph of a densely populated urban neighborhood. The image shows a variety of residential and commercial buildings, including multi-story apartment complexes, smaller houses, and industrial-style structures. Streets are visible with parked cars and some moving vehicles. A large, dark, semi-transparent rectangular box is overlaid on the left side of the image, containing the text "States in Focus" in a white, sans-serif font.

States in Focus



State in Focus:

Texas

750

total closures
since *Shelby*

590

total closures from 2014
Midterm to 2018 Midterm

43%

counties in sample that
reduced polling places
(109 of 251)

Almost half of all shuttered polling places in our sample took place in Texas, where voters have lost at least 750 polling places since *Shelby*. Most of these closures (–590) took place after the 2014 midterm election. After top-ranked Maricopa County in Arizona, the next six largest polling place closers by number were Texas counties: Dallas (–74), which is 41 percent Latino and 22 percent African American; Travis (–67), which is 34 percent Latino; Harris (–52), which is 42 percent Latino and 19 percent African American; Brazoria (–37), which is 30 percent Latino and 13 percent African American; and Nueces (–37), which is 63 percent Latino.⁴⁴ Furthermore, 14 Texas counties closed at least 50 percent of their polling places after *Shelby*.

These drastic reductions occurred against a backdrop of multiple court battles over state laws that discriminate against Black and Latino voters. These laws relate to electoral processes ranging from voter identification requirements, racial gerrymandering to prevent voters of color from electing their preferred candidates, purging voters from registration lists, and access to language assistance when voting. Hours after the *Shelby* decision, the Texas attorney general announced the state would implement a voter ID law that had been blocked from taking effect from 2011–2013 under Section 5's preclearance system. In 2017, a federal judge ruled that the law was enacted to intentionally discriminate against Black and Latino voters.

⁴⁴ See 2013–2017 American Community Survey 5-Year Estimates, Table B03002, U.S. CENSUS BUREAU (2017), https://factfinder.census.gov/tables/tableservices/isf/pages/productview.xhtml?pid=ACS_17_5YR_B03002&prodType=table.



In Texas, conversions to vote centers contributed to the majority of polling place closures. By design, conversions reduce the number of polling places and therefore the cost of holding elections, encourage counties to use only the most physically accessible sites for voting, and improve flexibility for voters.⁴⁵ As the Texas secretary of state outlined in early 2019, the conversion program allows counties to reduce polling places by 35 percent in the first year and 50 percent in a subsequent year.⁴⁶ While the state encourages counties to engage with voters of color in a public forum or on a committee when determining the placement and number of polling places, it does not require such involvement. Nor does it require a study of the impact of proposed changes on voters of color or provide a means to ensure they are not racially discriminatory. In the absence of Section 5, the onus is on voters and community organizations to hold counties accountable for racial discrimination when closing polling places.

But counties converting to vote centers aren't alone. Counties like Somervell (–80 percent), Loving (–75 percent), Stonewall (–75 percent), and Fisher (–60 percent) — all of which have large Latino populations — cut voting locations even though they did not transition to vote centers. In fact, voters in counties that still hold precinct-style elections have 250 fewer voting locations than they did in 2012.

Beth Stevens, director of the Voting Rights Program at the Texas Civil Rights Project, called closures “a real barrier” to voting. “Voters,” she said, “often don't hear that a beloved polling location near their home has closed until Election Day, forcing them to make disruptive changes on the spur of the moment to work schedules, childcare plans, and transportation arrangements. Even when they do hear about it ahead of time, voters may have to choose between going to a new polling place significantly further away and working enough hours that day to put food on the table — an impossible choice that no one should ever have to face. And it's a choice that usually falls on the most vulnerable voters, thereby reinforcing existing power structures and sending a message to these voters that they are less important than others in the eyes of their government.”

⁴⁵ See TEX. SEC'Y OF STATE, DIR. OF ELECTIONS, ELECTION ADVISORY NO. 2019-01, 2019 OPPORTUNITIES TO USE COUNTYWIDE POLLING PLACES (Jan. 2, 2019), <https://www.sos.state.tx.us/elections/laws/advisory2019-01.shtml>.

⁴⁶ See TEX. SEC'Y OF STATE, DIR. OF ELECTIONS, ELECTION ADVISORY NO. 2019-01, 2019 OPPORTUNITIES TO USE COUNTYWIDE POLLING PLACES (Jan. 2, 2019), <https://www.sos.state.tx.us/elections/laws/advisory2019-01.shtml>.



Texas

Counties in Focus: Nueces County

Nueces County, which is 63 percent Latino, has a clear record of problems with VRA compliance. Since *Shelby*, it has closed 37 polling places in its shift to vote centers — going from 121 voting locations in 2012 to 84 in 2018. This reduction occurred while the county also failed to provide voting information in Spanish during the 2016 election, a violation of its still-binding commitment under the VRA.⁴⁷ When preclearance was still intact in 2011, Nueces attempted to dilute the Latino vote in a redistricting plan for multiple county offices — despite the fact that Latino population growth greatly outpaced that of Whites.⁴⁸ That history resurfaced in 2018 during a county race between a White candidate and a Latina candidate. The White candidate said he needed to win to have authority over the redistricting process; “if we’re not,” he said, “we lose control of everything.”⁴⁹

Counties in Focus: Jefferson County

Located in southeast Texas, Jefferson County is home to the city of Beaumont. About one-third (34 percent) of its 250,000 residents are African American and one-fifth (20 percent) are Latino. County officials reduced the number of polling places from 57 in 2012 to 39 in 2018 when they converted to the vote center model. They also tried to nullify the votes of 86 mail-in ballot voters, most of whom are over age 65 and people with disabilities, in the 2018 election.⁵⁰ “Voter suppression really happens,” the Rev. Rufus Parker Jr. told the *Beaumont Enterprise* after his ballot was rejected. “The system is messed up.”

⁴⁷ See MALDEF Finds Dozens of Texas Counties Are Violating Federal Law by Failing to Provide Bilingual Voting Information, MALDEF (Oct. 6, 2016) <https://www.maldef.org/2016/10/maldef-finds-dozens-of-texas-counties-are-violating-federal-law-by-failing-to-provide-bilingual-voting-information/>.

⁴⁸ See Letter from Thomas E. Perez, Assistant Att’y Gen., U.S. Dep’t of Justice Civil Rights Div., to Joseph M. Nixon, Dalton L. Oldham, and James E. Trainor of Beirne Maynard & Parsons (Feb. 7, 2012), <https://www.justice.gov/crt/voting-determination-letter-31> (last updated Aug. 6, 2015).

⁴⁹ Tim Acosta, Nueces County Judge Candidates Spar Over Redistricting, Control, CALLER TIMES (Oct. 31, 2018, 4:30PM), <https://www.caller.com/story/news/local/2018/10/31/nueces-county-judge-candidates-spar-over-redistricting-control/1803161002/>.

⁵⁰ See Phoebe Suy, Jefferson County’s Rejected Voters Were Elderly, Infirm, or Out-of-town, BEAUMONT ENTERPRISE (Nov. 9, 2018 9:26AM), <https://www.beaumontenterprise.com/news/article/Jefferson-County-s-rejected-voters-were-13376673.php>.





State in Focus:

Arizona

320

total closures since *Shelby*

235

total closures from 2014
Midterm to 2018 Midterm

87%

counties in sample that
reduced polling places
(13 of 15)

Arizona, where 31 percent of the population is Latino, 4 percent is Native American, and 4 percent is African American, was required to submit voting changes for preclearance under the 1975 reauthorization of the VRA, which expanded Section 5 to include voters who speak a language other than English as their primary language, including Latinos, Asian Americans, and Native Americans.⁵¹ Since the loss of Section 5 preclearance, Arizona counties have embarked on a massive effort to close polling places statewide, and they have succeeded: The state now has 320 fewer polling places in Arizona than it did in 2012. These closures occurred despite national news coverage of the adverse impact of polling place reductions in Maricopa County in the 2016 presidential preference election,⁵² which forced voters to stand in line for five hours to cast a ballot.⁵³ Most of these closures (–235) have taken place since 2014.

⁵¹ See U.S. COMM'N ON CIVIL RIGHTS, AN ASSESSMENT OF MINORITY VOTING RIGHTS ACCESS IN THE UNITED STATES 171 (2018), https://www.usccr.gov/pubs/2018/Minority_Voting_Access_2018.pdf; see 2013-2017 American Community Survey 5-Year Estimates, Table B03002, U.S. CENSUS BUREAU (2017), https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B03002&prodType=table.

⁵² "The Presidential Preference Election (PPE), is an election in which voters can choose who they would like to be their presidential candidate in the upcoming General Election. Party winners of the Arizona PPE are officially determined at the party's national convention." <https://www.azcleanelections.gov/how-to-vote/Presidential-Preference-election>.

⁵³ See Editorial, Our View: A Five-Hour Wait to Vote in Arizona Primary? That's Shameful, AZ CENTRAL (Mar. 23, 2016, 8:47AM), <https://www.azcentral.com/story/opinion/2016/03/23/arizona-primary-our-view-we-outraged-long-lines/82152636/>.



Arizona

With a reduction of 171 polling places, Maricopa County, which is 31 percent Latino, is by far the largest closer of polling places in our study. It closed more polling places than the second and third highest-ranked counties combined. In advance of the 2016 presidential preference election, Maricopa drastically reduced polling places, resulting in long lines that drew national attention and lawsuits from civil rights groups.⁵⁴ A settlement with civil rights groups led the county to reopen polling places for the 2016 general election — albeit with fewer than it had in the pre-*Shelby* 2012 presidential election.⁵⁵ Two years later, instead of responding to the clear demand for more polling places, the county *cut well over 100 more voting locations*. Between Arizonans' increased use of mail-in ballots and Maricopa County's experimentation with vote centers, it is difficult to determine the full impact of polling place closures on various communities without additional analysis. Yet it is incumbent upon the county to ensure that closures do not have a racially discriminatory impact.

The drive to reduce polling places was not confined to Maricopa. In fact, four of the top 10 closers in our sample were counties in Arizona: Maricopa (–171), which is 31 percent Latino; Mohave (–34), which is 16 percent Latino; Cochise (–32), which is 35 percent Latino; and Pima (–31), which is 37 percent Latino. In the 2016 edition of *The Great Poll Closure*, Pima was the biggest closer in the nation (though it has since reopened 31 polling places). The scale of closures throughout the state is equally concerning in Cochise (–65 percent), Graham (–50 percent), Mohave (–49 percent), and Gila (–48 percent) counties, all of which closed about half or more of their polling places.⁵⁶

Some counties in Arizona, however, are clearly trying to ensure that voters of color can access the ballot box. Navajo County, which, as noted above, is 46 percent Native American, maintained a steady number of polling places despite its conversion to vote centers. In Coconino County, which is 26 percent Native American and 14 percent Latino, many polling places on a Navajo reservation were not ADA-compliant. Yet the county has opted to keep these polling places open and make low-cost modifications to ensure voter accessibility — rather than close them outright.⁵⁷

⁵⁴ See Mary Jo Pitzl, Anne Ryman & Rob O'Dell, Long Lines, Too Few Polls Frustrate Metro Phoenix Primary Voters, AZ CENTRAL (Mar. 23, 2016, 12:42AM), <https://www.azcentral.com/story/news/politics/elections/2016/03/22/arizona-primary-voter-turnout-long-lines/82125816/>.

⁵⁵ See THE LEADERSHIP CONFERENCE EDUCATION FUND, THE GREAT POLL CLOSURE 7 (Nov. 2016), <http://civilrightsdocs.info/pdf/reports/2016/poll-closure-report-web.pdf>.

⁵⁶ See 2013-2017 American Community Survey 5-Year Estimates, Table B03002, U.S. CENSUS BUREAU (2017), https://factfinder.census.gov/tables//sf/tables//productview.xhtml?pid=ACS_17_5YR_B03002&prodType=table.

⁵⁷ See Kira Lerner, The ADA Is Being Used to Disenfranchise Minority Voters, THINKPROGRESS (Aug. 24, 2018, 1:46PM), <https://thinkprogress.org/ada-voter-suppression-cd7031080bfd/>.



State in Focus:

Georgia

214

total closures since *Shelby*

113

total closures from 2014
Midterm to 2018 Midterm

33%

counties in sample that
reduced polling places
(53 of 159)

Counties drastically reduced polling places across Georgia after *Shelby*. According to the *Atlanta Journal-Constitution*, voters across the state now have 214 fewer places to cast ballots; in some rural counties, voters are left with only one polling place. More than half (–113) of these sites have closed since the 2014 midterm election. One of the most troubling facets of Georgia’s great poll reduction is its scale: Eighteen counties closed more than half of their polling places, and several closed almost 90 percent.

These sharp declines all occurred when Brian Kemp was overseeing elections while serving as Georgia’s secretary of state (between the years of 2010 and 2018). During his tenure, he erected barriers that made it harder for people of color to vote. From 2010 to 2018, he purged more than 1.4 million voters from the state’s voter registration rolls, many simply because they did not vote in previous elections.⁵⁸

⁵⁸ Alan Judd, Georgia's Strict Laws Lead to Large Purge of Voters, *AJC* (Oct. 27, 2018), <https://www.ajc.com/news/state-regional-govt-politics/voter-purge-begs-question-what-the-matter-with-georgia/YAFvuk3Bu95k.JIMaDIDFqJ/>.



Georgia

In the wake of the *Shelby* decision, Kemp's office began to encourage polling place reductions leading up to the 2016 presidential election. In a February 2015 memo to local election officials, Kemp asks, "When should you begin the plan of consolidation or making changes to precincts or polling places?" The answer? "Now. Plan to spend 2015 making all the changes so that you, your county and your voters are ready for the 2016 elections."⁵⁹

The six-page document offers guidance on how to change and consolidate polling places. It does not recommend — or even acknowledge the obligation to consider — the impact of polling place changes on low-income communities and communities of color. The only reference to voting rights is the following sentence, which appears twice in the document: "As a result of the *Shelby vs. Holder (sic)* Supreme Court decision, you are no longer required to submit [precinct or polling place] changes to the Department of Justice for preclearance."⁶⁰

Georgia's 2018 gubernatorial election received national attention because Stacey Abrams, a civil rights advocate and former minority leader of the Georgia House of Representatives, became the first African American woman to be nominated by a major party to run for the state's top office. She ran against Kemp, who was overseeing the election at the time and actively working to disenfranchise people of color. Before Election Day, 53,000 voter registration applications were put on hold, 75 percent of which belonged to voters of color.⁶¹

⁵⁹ Memorandum from Ga. Sec'y of State Elections Div. to Ga. Local Election Officials 2 (Feb. 2015) (on file with author).

⁶⁰ Memorandum from Ga. Sec'y of State Elections Div. to Ga. Local Election Officials 3 (Feb. 2015) (on file with author).

⁶¹ <https://apnews.com/fb011f39af3b40518b572c8cce6a906c>





State in Focus:

Louisiana

126

total closures since *Shelby*

76

total closures from 2014
Midterm to 2018 Midterm

66%

counties in sample that
reduced polling places
(42 of 64)

In Louisiana, voters have 126 fewer places to vote than they did in 2012. Since VRA safeguards were removed, two-thirds of the state's parishes have closed polling places. seventy-six closed after the 2014 midterm election. Winn Parish, which is 31 percent African American, closed 24 percent of its polling places, the highest percentage in the state. Lafayette followed with 17 percent, Jefferson with 15 percent, and Bienville and Morehouse with 14 percent each.

East Baton Rouge Parish, which is 46 percent African American, has closed 10 polling places since *Shelby*. In October 2016, the parish voted to consolidate 19 polling places due to "historic flooding." This "temporary" consolidation was intended to apply only to the 2016 election, according to local news sources.⁶⁸ But our analysis revealed that at least eight closed locations did not reopen by 2018.

⁶⁸ See Kevin Dupuy, Temporary Voting Locations Approved for EBR Precincts, WBRZ (Oct. 10, 2016 3:15PM), <http://www.wbrz.com/news/temporary-voting-locations-approved-for-ebz-precincts>.



This trend — temporarily closing polling places on an emergency basis but never reopening them — continues. In the aftermath of Hurricane Katrina, Orleans Parish, reeling from a major loss of population and nonfunctioning polling places, cut the number of voting locations in half — from 252 to 120.⁶⁹ Fifteen years later, the polling place map supposedly designed for emergency conditions appears to be permanent, especially in the Lower 9th Ward, home to a large Black population. In the 2018 election, voters in Orleans Parish had only 124 places to vote. When asked about the closures, Stacy Head, former president of the New Orleans City Council, didn't comment other than to say she "couldn't recall any complaints about voting locations."⁷⁰

This compounds the long travel times to the polls many Black voters experience, an established problem in Louisiana. The Louisiana Advisory Committee to the U.S. Commission on Civil Rights cited Jhacova Williams, an economics professor who testified that the number of polling locations in a subdivision negatively correlates with the number of Black people in the subdivision. "This means that there are fewer polling locations per voter in a geographical area if that area has more Black residents," she said. "This in turn implies that Black residents face longer travel distances to reach a polling location."⁷¹

⁶⁹ See Charles Maldonado, Many New Orleans Voters Are Still Driving Farther to Vote than Before Katrina, THE LENS (Nov. 8, 2016), <https://thelensnola.org/2016/11/08/many-new-orleans-voters-are-still-driving-farther-to-vote-than-before-katrina/>.

⁷⁰ Charles Maldonado, Many New Orleans Voters Are Still Driving Farther to Vote than Before Katrina, THE LENS (Nov. 8, 2016), <https://thelensnola.org/2016/11/08/many-new-orleans-voters-are-still-driving-farther-to-vote-than-before-katrina/>.

⁷¹ LA. ADVISORY COMM. FOR THE U.S. COMM'N ON CIVIL RIGHTS, BARRIERS TO VOTING IN LOUISIANA 12 (Jun. 2018).



State in Focus:

Mississippi

96

total closures since *Shelby*

49

total closures from 2014
Midterm to 2018 Midterm

38%

counties in sample that
reduced polling places
(31 of 82)

In Mississippi, we found that counties closed 96 polling places since VRA safeguards were removed. Of these, 49 took place after the 2014 midterm election. Since *Shelby*, almost 40 percent of Mississippi counties have closed polling places. Pearl River and Harrison counties closed 13 polling places each since VRA safeguards were removed, the most in the state.

Pearl River County closed 39 percent of its polling places, the largest percentage in the state. This massive reduction could have been much worse. In 2017, Pearl River's board of supervisors proposed eliminating 25 of the county's 37 polling places, for a potential 64 percent reduction. But pushback led to keeping open 20 voting locations.⁷² The board of supervisors claimed the reduction was necessary to ensure that all polling places were compliant with the ADA, even though one election commissioner — Margaret Woodson — admitted she lacked expertise in the law. "We're not knowledgeable in the rules for ADA compliancy," Woodson said at a board meeting considering the elimination of polling places. "We're election commissioners. We're not qualified to tell you for sure if these locations are or are not compliant."⁷³

⁷² See Rashell Reese, New Voting Precincts Finalized for Pearl River County, WRJW (Oct. 19, 2017), <https://www.wriwradio.com/single-post/2017/10/19/New-voting-precincts-finalized-for-Pearl-River-County>.

⁷³ Rashell Reese, New Voting Precincts Finalized for Pearl River County, WRJW (Oct. 19, 2017), <https://www.wriwradio.com/single-post/2017/10/19/New-voting-precincts-finalized-for-Pearl-River-County>.



Mississippi

The process in Pearl River County appears to have been much more deliberate than in Harrison County, which also closed 13 polling places, a 20 percent reduction. In October 2018, *Mississippi Today* chronicled polling place reductions across the state and highlighted the steep drop in the county, the second most populous in the state. The report shined a light on a precinct in an elementary school where 2016 voters “stood in lines weaving through the classroom hallways and out the door.” But instead of creating more voting locations, election commissioners scaled the number back. As one commissioner told the newspaper, “I don’t know if it’s going to create longer wait times, but they’ll be inside for that wait.”⁷⁴

The article cited the commissioner’s list of factors to consider when deciding whether to reduce polling locations, including “the quality of the facility, how much further voters will have to travel, handicap accessibility, lighting, and room for lines.” The impacts on low-income voters and voters of color were not listed as factors for consideration. One county commissioner told journalists, “You can’t just go back to the way it was before” — a reference to the elimination of preclearance. County officials apparently anticipated long lines and intentionally planned extra space at existing polling stations to accommodate them. This plan apparently came to fruition. In November 2018, TV reporters showed “long lines across south Mississippi as voters show up at the polls.”⁷⁵ The station singled out a polling place in Harrison County where “hundreds of people waited to vote.”

Mississippi Today also documented counties that acted to prevent potential voting discrimination when they made changes to polling places. Smith County, for example, moved but did not eliminate its polling places and continues to notify the DOJ of its changes, even though it is no longer required to do so. When the county moved a polling place in September 2018, two Black officials sent affidavits to the DOJ and to Mississippi’s secretary of state that declared the move necessary and said it was “not made to inconvenience voters, especially minority voters.”

⁷⁴ Anna Wolfe & Alex Rozier, Free From Federal Oversight, 5 Percent of Mississippi Polling Locations Have Closed Since 2013, SUNHERALD (Oct. 6, 2018, 9:01PM), <https://www.sunherald.com/news/politics-government/election/article220693015.html>.

⁷⁵ See Lindsay Knowles, Long Lines Across South MS as Voters Show Up at the Polls, WLOX (Nov. 6, 2018, 10:38AM), <https://www.wlox.com/2018/11/06/long-lines-voters-harrison-county-polls-open/>.



State in Focus:

Alabama

72

total closures since *Shelby*

26

total closures from 2014
Midterm to 2018 Midterm

34%

counties in sample that
reduced polling places
(23 of 67)

Since voting rights safeguards were removed in 2013, Alabama has eliminated 72 polling places without clear oversight or accountability. Of these, 26 have taken place since the 2014 midterm election. The polling place reductions took place against the backdrop of various voting changes, causing concern among voting rights advocates. Changes included polling place consolidation in Daphne, Alabama; the enactment of a strict voter ID law accompanied by massive closures of DMV offices in counties with large Black populations; voter purges; and the Alabama secretary of state's refusal to inform recently re-enfranchised voters that their voting rights were restored.⁷⁶

State election officials have even submitted inaccurate counts of polling places to the U.S. Election Assistance Commission (EAC). Our 2016 *Great Poll Closure* report relied on data provided by Alabama's secretary of state in 2012 and 2014. The state disclosed that Elmore County, which is 21 percent Black, had 42 polling places in 2012 and 2014, when in fact it only had 28.⁷⁷ When local journalists asked about the inaccuracy, a spokesperson for the Alabama secretary of state said The Education Fund "misread" the number 42.⁷⁸ Alabama did not fill out any information related to polling places in response to EAC's 2016 survey.⁷⁹

⁷⁶ See Campbell Robertson, For Alabama's Poor, the Budget Cuts Trickle Down, Limiting Access to Driver's Licenses, N.Y. TIMES (Oct. 9, 2015), <https://www.nytimes.com/2015/10/10/us/alabama-budget-cuts-raise-concern-over-voting-rights.html?module=inline>.

⁷⁷ The Great Poll Closure, The Leadership Conference Education Fund, November 1, 2016.

⁷⁸ See Connor Sheets, How One Alabama County Was Wrongly Identified as the State's Worst on Voting Access, BIRMINGHAM NEWS (Jan. 13, 2017, 1:32PM), https://www.al.com/news/birmingham/2016/11/how_one_alabama_county_was_wro.html.

⁷⁹ Election Assistance Commission, 2016 Election and Voting Survey, <https://www.eac.gov/research-and-data/2016-election-administration-voting-survey/>.



Alabama

Marshall County, which is 13 percent Latino, is the state's largest closer, closing 10 polling places (26 percent) since 2012. Despite this reduction, the county's lead election official called for a review of Marshall's remaining polling sites in 2019 to assess disability accessibility.⁸⁰ Such a review may appear to be intended to enhance voting rights, but it could be a canard: Lack of ADA compliance is often used as an excuse to close polling places in other jurisdictions. In news reports, election officials did not cite any complaints or concerns about accurate ADA compliance at particular polling sites.

Mobile County, which is 35 percent African American, tied with Marshall County; it too closed 10 locations, or about 10 percent of its voting sites. Most polling sites were eliminated in early 2014, immediately after *Shelby*⁸¹ — a reduction covered by the *Lagniappe Weekly*. The county has yet to provide clear justification for the swift and significant closures.⁸² In a 2018 interview with *Birmingham Watch*, a county commissioner indicated that the reduction was due to growth in voting populations — a counterintuitive argument, to be sure. A more inclusive democracy demands more polling places, not fewer.⁸³ The commissioner cited ADA compliance, parking, and traffic as the major points of consideration when placing the new sites. Missing from her list: preventing racial discrimination. “How disconcerting to know our own state has silenced the voices of thousands by an act as simple as closing polls in the Black Belt,” Jessica Barker, a Huntsville-based advocate who leads Lift Our Vote 2020, told The Education Fund.

⁸⁰ See Stephen McLamb, Probate Judge Plans Review of Polling Locations for ADA Compliance in Marshall County, WAFF48 (Mar. 26, 2019, 6:37PM), <https://www.waff.com/2019/03/26/probate-judge-plans-review-polling-locations-ada-compliance-marshall-county/>.

⁸¹ See Polling Centers Moved or Eliminated in 19 Mobile County Precincts, LAGNIAPPE WEEKLY (Mar. 12, 2014), <https://lagniappemobile.com/polling-centers-moved-or-eliminated-in-19-mobile-county-precincts/>.

⁸² See Mary Sell, In Some Counties, Alabama Voters Have Lost a Quarter of Their Polling Places Since 2010, BIRMINGHAM WATCH (Nov. 2, 2018), <https://birminghamwatch.org/counties-alabama-voters-lost-quarter-polling-places-since-2010/>.

⁸³ See Donna Thornton, Possible Changes in District 2 Polls Bring Opposition, GADSDEN MESSENGER (Sep. 6, 2013), <https://gadsdenmessenger.com/2013/09/06/possible-changes-in-district-2-polls-bring-opposition/>.





Counties in Focus: Etowah County

Etowah County, Alabama, which is 15 percent African American, closed nine polling places after *Shelby*, or almost a quarter of its voting locations. Its justifications were among the most confusing we found. After a public hearing on the matter in 2013, the *Gadsden Messenger* noted that the changes were made for “financial and other reasons,” including “a new state law [that] mandates polling places be moved from schools for security reasons.” Local election official Bobby Junkins also wanted to take polling places off of private property because “voting at churches eventually will become an issue.”⁸⁴ Later reports said Junkins said “it has been suggested that voting locations not be on private property” and that “new federal regulations prohibit voting locations at schools.”⁸⁵

We could not verify the existence of any federal, state, or local regulation requiring voting locations to be removed from schools or from private property, such as churches.

⁸⁴ See Donna Thornton, Possible Changes in District 2 Polls Bring Opposition, GADSDEN MESSENGER (Sep. 6, 2013), <https://gadsdenmessenger.com/2013/09/06/possible-changes-in-district-2-polls-bring-opposition/>.

⁸⁵ Lisa Rogers Savage, Some Voting Locations Changed, GADSDEN TIMES (May 31, 2014, 9:00PM), <https://www.gadsdentimes.com/news/20140531/some-voting-locations-changed>.



State in Focus:

North Carolina

29

total closures since *Shelby*

18

total closures from 2014
Midterm to 2018 Midterm

25%

counties in sample that
reduced polling places
(23 of 67)

Since *Shelby*, the North Carolina legislature has doggedly attempted to reduce voting access for people of color at every juncture of the voting process. In 2018, almost half of all counties in the state cut early voting locations,⁸⁶ and a federal court called its 2016 “monster” voting law “the most restrictive voting law North Carolina has seen since the era of Jim Crow.”⁸⁷ The law included cuts to early voting, restrictive voter ID provisions, and eliminated out-of-precinct voting.

Against this backdrop of high-profile voting rights violations, one quarter of the counties that were once covered by Section 5 have quietly consolidated Election Day polling places — with shockingly little public scrutiny. Since *Shelby*, officials in the 40 preclearance counties have shuttered 29 polling places, most of which (–18) have been closed since the last midterm election in 2014.

⁸⁶ See Blake Paterson, Bipartisan Furor as North Carolina Election Law Shrinks Early Voting Locations by Almost 20 Percent, PROPUBLICA (Sep. 24, 2018, 5:00AM), <https://www.propublica.org/article/bipartisan-furor-as-north-carolina-election-law-shrinks-early-voting-locations-by-almost-20-percent>.

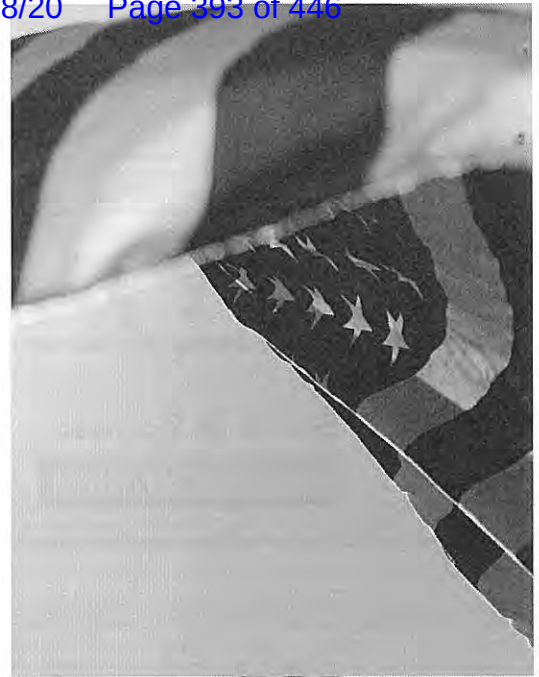
⁸⁷ William Wan, Inside the Republican Creation of the North Carolina Voting Bill Dubbed the ‘Monster’ Law, WASH. POST (Sep. 2, 2016), https://www.washingtonpost.com/politics/courts_law/inside-the-republican-creation-of-the-north-carolina-voting-bill-dubbed-the-monster-law/2016/09/01/79162398-6adf-11e6-8225-fbb8a6fc65bc_story.html.



North Carolina

North Carolina's largest closer by percentage (31 percent) is majority-White Pasquotank County, which eliminated half the polling places in Elizabeth City, which is 52 percent African American. In a 2-1 vote, county officials shuttered four polling places in Elizabeth City without any public input and over the objections of the local NAACP branch.⁸⁸ Officials attributed the closures to cost constraints, but they closed polling places in Elizabeth City alone — and nowhere else in the entire county.⁸⁹

The largest closer of polling places by number is Cleveland County, which eliminated five polling places in the first federal election after *Shelby* despite clear opposition from the local NAACP chapter as well as from one of its three election officials.⁹⁰ These closures — planned in the city of Shelby, North Carolina — were intended to eliminate three polling places in areas with a large share of Black voters — and to make the remaining two voting locations the largest in the county. This realignment came at a time when state law invalidated ballots cast at the “wrong” polling place.⁹¹ The champion for the reduction was a White election official who expressed “shock” at opposition from Black voters and claimed not to know when he proposed the reduction that Section 5 would no longer apply to the county.⁹²



⁸⁸ See Voting Precinct Merger Approved, DAILY ADVANCE (Jul. 18, 2015), <http://www.dailyadvance.com/News/2015/07/18/Voting-precinct-merger-approved.html>.

⁸⁹ See Voting Precinct Merger Approved, DAILY ADVANCE (Jul. 18, 2015), <http://www.dailyadvance.com/News/2015/07/18/Voting-precinct-merger-approved.html>.

⁹⁰ See Joe DePriest, Cleveland County Board of Elections Considering Merging 5 Precincts Into 2, THE HERALD (Mar. 2, 2015 10:08PM), <https://www.heraldonline.com/latest-news/article11565497.html>.

⁹¹ See Joe DePriest, Cleveland County Board of Elections Considering Merging 5 Precincts Into 2, THE HERALD (Mar. 2, 2015 10:08PM), <https://www.heraldonline.com/latest-news/article11565497.html>.

⁹² See Richard Fausset, Mistrust in North Carolina Over Plan to Reduce Precincts, N.Y. TIMES (Jul. 7, 2014), <https://www.nytimes.com/2014/07/08/us/08northcarolina.html>.



Blaming Voters with Disabilities

One of the more alarming trends we discovered is a widespread practice of blaming polling place closures on another civil rights law, the Americans with Disabilities Act (ADA). The leading closers of polling places from Mississippi, Georgia, and Louisiana used ADA compliance as their major pretext. In several cases, little to no effort was made to understand ADA compliance. Instead, election officials took advantage of the public's lack of understanding about the law to grossly inflate the estimated costs of compliance for both publicly and privately owned polling places.

Closing polling places because of a lack of ADA compliance should be a last resort for election officials and should happen only when there are no suitable alternative sites, no possible same-day modifications, and no possibilities for curbside voting and other best practices to ensure accessibility. In addition, officials must be required to conduct a thorough analysis to determine the impact on voters of color. The DOJ provides clear guidance and support for helping ensure that parking lots, hallways, doorways, and walkways are accessible to all voters.⁹³ Ensuring ADA compliance might be as simple and inexpensive as:

- Creating accessible parking with temporary signage and traffic cones;
- Building temporary ramps for curbs and staircases; and/or
- Installing doorbells or propping heavier doors open

⁹³ See generally U.S. DEP'T OF JUSTICE CIVIL RIGHTS DIV. DISABILITY RIGHTS SECTION, SOLUTIONS FOR FIVE COMMON ADA ACCESS PROBLEMS AT POLLING PLACES, https://www.ada.gov/ada_voting/voting_solutions_to/polling_place_solutions.pdf (last visited Aug. 6, 2019).

Perhaps the most successful effort to turn back proposed polling place closures in a formerly covered jurisdiction happened in 2018, after officials in Randolph County, Georgia, attempted to use the ADA as an excuse to close seven of its nine polling places in a county that is 60 percent African American.⁹⁴ According to a county attorney, the plan was not based on any actual analysis of ADA accessibility for the voting locations. “There is no document, report or analysis studying the handicap accessibility of polling places,” the attorney wrote to a journalist in response to a public records request.⁹⁵

Swift opposition to the closures came from national and local stakeholders, including the National Disability Rights Network,⁹⁶ the ACLU of Georgia, the Georgia NAACP, and The Education Fund. Former U.S. Rep. Tony Coelho — the author of the ADA — called the plan “a violation of the law I and others worked so hard to pass.”⁹⁷ Advocates successfully blocked the proposed closures in Randolph County, but not in many other Georgia counties.

Lumpkin County, Georgia, the largest closer of polling places by percentage in the state, used ADA compliance as an excuse to eliminate all but one polling place in the 284-square mile county. Toombs County, Georgia, which is 25 percent African American and 12 percent Latino, shuttered 64 percent of its polling places in 2015. Toombs officials claimed that closing nine of its 14 polling places would save up to \$200,000 needed for operations and to secure ADA compliance.⁹⁸ Immediately after the *Shelby* decision, Habersham County, Georgia, which is 14 percent Latino and 3 percent African American, used ADA compliance as a purported reason to shutter 85 percent of its polling places — reducing voting locations from 14 to just two. This seismic shift led to long lines and voting problems, for which the elections board blamed voters for having the audacity to wait until Election Day to vote.⁹⁹ The county backpedaled on the consolidation and reopened several more polling places in the 2016 election.¹⁰⁰

⁹⁴ See Associated Press, NBC NEWS (Aug. 4, 2018, 4:00PM),

<https://www.nbcnews.com/news/nbcblk/georgia-county-scraps-plan-close-most-polling-places-n903691>.

⁹⁵ Sam Levine, Georgia County Can't Back Up Its Excuse for Plan to Disenfranchise Black Voters, HUFFINGTON POST (Aug. 22, 2018), https://www.huffpost.com/entry/georgia-county-close-polling-places-access_n_5b7c7484e4b07295150dbaf3.

⁹⁶ See The Leadership Conference (@civilrightsorg), An Open Letter to the Georgia Secretary of State, MEDIUM (Nov. 5, 2018), <https://medium.com/@civilrightsorg/an-open-letter-to-the-georgia-secretary-of-state-c2aa09e676a9>.

⁹⁷ Americans with Disabilities Act Author: Kemp Has Failed to Comply with ADA, GA. DEMOCRATS (Aug. 23, 2018), <https://www.georgiademocrat.org/2018/08/kemp-ada/>.

⁹⁸ See Change to Toombs Voting Precincts, SE. GA. TODAY (Mar. 7, 2015), <http://southeastgeorgiatoday.com/~southe12/index.php/archived-newsbreaks/12580-sp-1330955164>.

⁹⁹ See Joy Purcell, Elections Board Focuses on “Process Improvement”, NOW HABERSHAM (Dec. 21, 2014), <https://nowhabersham.com/elections-board-focuses-on-process-improvement/>.

¹⁰⁰ See Rob Moore, Habersham Voters Will Use New Polling Locations Tomorrow, ACCESSWDUN (Feb. 29, 2016 1:06PM), <https://accesswdun.com/article/2016/2/273697/habersham-voters-to-use-new-polling-locations-tomorrow>.

Pearl River County, one of the largest closers of polling places in Mississippi, used ADA compliance as its purported rationale to shutter 13 locations. In 2017, the county's board of supervisors proposed slashing its number of polling places from 33 to 12 — but pushback from the community led to a compromise reduction to 20. Supervisors and election commissioners said the reason was ADA compliance, but radio journalists reported that they hadn't even attempted to understand how to determine ADA compliance.¹⁰¹ The officials also seemed to conflate ADA compliance with budget concerns, with one official saying, "I'm going [to] catch some hell about it but I'm not paying \$60 a vote."¹⁰² The ADA rationale is especially puzzling in light of a 2010 agreement between the DOJ and the county that specified exactly which polling places in the county were and were not ADA compliant. The agreement detailed specific corrective actions for the county to bring them up to code.¹⁰³



¹⁰¹ See Rashell Reese, New Voting Precincts Finalized for Pearl River County, WRJW (Oct. 19, 2017), <https://www.wriwradio.com/single-post/2017/10/19/New-voting-precincts-finalized-for-Pearl-River-County>.

¹⁰² See Rashell Reese, New Voting Precincts Finalized for Pearl River County, WRJW (Oct. 19, 2017), <https://www.wriwradio.com/single-post/2017/10/19/New-voting-precincts-finalized-for-Pearl-River-County>.

¹⁰³ See Pearl River County, Mississippi, (Dep't of Justice Jul. 20, 2010) (settlement agreement), https://www.ada.gov/pearl_co_pca/pearl_co_sa.htm.

A Tale of Two Jeffersons

In Louisiana, the largest closer of polling places was Jefferson Parish, which is 26 percent African American and 14 percent Latino and which had 25 fewer voting locations in 2018 than before the 2012 election. The sharp drop came in 2015 after a local disability rights group survey found that many polling places had "significant barriers to individuals with mobility impairments."¹⁰⁴ Instead of making modifications or finding more suitable voting locations, the parish closed 23 polling places.¹⁰⁵ In the three years since, the county has closed two more polling places. This development is not out of character for Jefferson Parish, which has a grave record of hostility toward Black residents' voting rights.¹⁰⁶

These actions stand in stark contrast to Jefferson County, Alabama, which has made efforts to ensure that polling place reductions are adopted as a last resort. Jefferson is the largest county in the state and home to Birmingham, as well as a population that is 42 percent African American and 4 percent Latino. The county, which eliminated five precincts, actively adds precincts when lines get long, as noted on its website, which documents all precinct changes.¹⁰⁷ And instead of closing the 32 polling places that were found out of compliance with the ADA in 2016, county officials worked to address as many problems as possible so they could keep the facilities open.¹⁰⁸

Instead of making modifications or finding more suitable voting locations, the parish closed 23 polling places.

¹⁰⁴ See Paul Purpura, Kenner Woman Sues Jefferson Parish to Get Better Access for Disabled Voters, TIMES-PICAYUNE | NEW ORLEANS ADVOC. (Jun. 9, 2010, 2:18AM), https://www.nola.com/politics/2010/06/kenner_woman_sues_jefferson_pa.html.

¹⁰⁵ See Wilborn P. Nobles III, Jefferson Parish Has 23 Fewer Places to Vote this Year; Here's Why, TIMES-PICAYUNE | NEW ORLEANS ADVOC. (Nov. 8, 2016, 9:57PM), https://www.nola.com/politics/2016/11/jefferson_fewer_voting_sites.html.

¹⁰⁶ See DEBO P. ADEGBILE, VOTING RIGHTS IN LOUISIANA 1982-2006, at 17-18, 23, 28, 45-46 (Mar. 2006), <http://www.protectcivilrights.org/pdf/voting/LouisianaVRA.pdf>.

¹⁰⁷ See generally Voting Precinct Changes, PROB. CT. OF JEFFERSON COUNTY, ALA., <http://jeffcoprobatecourt.com/elections/voting-precinct-changes/> (last visited Aug. 6, 2019).

¹⁰⁸ See Alex Aubuchon, Jefferson County Disability Voting Settlement, ALA. PUB. RADIO (Oct. 31, 2016), <https://www.apr.org/post/jefferson-county-disability-voting-settlement>.

Complying with the ADA does not have to mean mass polling place closures.

Complying with the ADA does not have to mean mass polling place closures, as Jefferson County shows. Counties can keep polling places open and serving all voters — as opposed to no voters at all. Coconino County in Arizona settled with the DOJ after it found that 46 of its polling places, many of which were on tribal lands, were not compliant with the ADA in 2016.¹⁰⁹ The county, which is 26 percent Native American and 14 percent Latino, is working with the Navajo Nation to ensure compliance in advance of the 2020 election and, as per the settlement agreement, will “provide an accessible voting program, including a program that is accessible to persons with mobility or vision disabilities and accessible polling places at accessible sites.”¹¹⁰

Richland County, South Carolina, which is 48 percent African American, is also using ADA compliance to enhance voting opportunities. The county also entered a settlement agreement with the DOJ to improve access to polling places.¹¹¹ Instead of reducing voting locations, the county added them and improved access to curbside voting to inaccessible polling places.¹¹² This is a far cry from the discriminatory rhetoric used by a McLennan County, Texas, commissioner, who told the *Waco Tribune* that “the ADA is prohibiting people from voting.”¹¹³

There are myriad ways to ensure all voters have access to polling places and that all comply with DOJ guidance for polling place accessibility and the ADA; simply shutting down polling places without regard to voting rights has the opposite effect.

¹⁰⁹ See Anna V. Smith, Arizona’s Long Road to Make Elections Accessible, HIGH COUNTRY NEWS (Nov. 21, 2018), <https://www.hcn.org/articles/tribal-affairs-arizonas-long-road-to-make-elections-accessible>.

¹¹⁰ Kira Lerner, The ADA Is Being Used to Disenfranchise Minority Voters, THINKPROGRESS (Aug. 24, 2018, 1:46PM), <https://thinkprogress.org/ada-voter-suppression-cd7031080bfd/>.

¹¹¹ See Richland Cty. Bd. of Elections and Voter Registration, S.C., (Dep’t of Justice May 22, 2017) (settlement agreement), https://www.ada.gov/richland_county_sa.html.

¹¹² See Jason Axelrod, Civil Disability, AM. CITY & COUNTY (Informa PLC, London, SW1P 1WG), Jun. 5, 2018, <https://www.americancityandcounty.com/2018/06/05/civil-disability/>.

¹¹³ Cassie L. Smith, County Vote Centers Change, Creating Frustration, WACO TRIB.-HERALD (Jul. 10, 2017), https://www.wacotrib.com/news/elections/county-vote-centers-change-creating-frustration/article_6c134b4e-1551-5906-a96c-2458fe26f9d9.html.



School Safety: No Excuse to Deny Voting Rights

Our analysis indicates that a climate of fear of school shootings has contributed to an unintended — and unfortunate — outcome: fewer polling places.

In states and localities across our study, we found election and education officials citing school safety as a reason to remove polling places from schools. This unnecessary and counterproductive response has a corrosive effect on the right to vote in low-income neighborhoods, in rural communities, and for people with disabilities. It also erects barriers between communities and schools. That said, many communities are dealing with school safety concerns in a better way: by turning Election Day into a school holiday.

In Alabama, officials justified a spate of polling place consolidations in advance of the 2014 election as a response to school safety concerns and unverified claims of new state and federal regulations to remove polling places from schools. A local newspaper reported that several of Etowah County's nine polling place closures were first explained as a response to "a new state law" that "mandates polling places be moved from schools for security reasons."¹¹⁴ No such law exists. A subsequent article said that some closures were in response to "new federal regulations [that] prohibit voting locations at schools."¹¹⁵ No such federal regulations exist. In Morgan County, where five polling places were consolidated to remove them from schools, the local election official said schools feared for their students' safety, even telling a local newspaper that hosting polling places in schools is problematic because "you're opening up the schoolchildren to potential threats."¹¹⁶

¹¹⁴ See Donna Thornton, Possible Changes in District 2 Polls Bring Opposition, GADSDEN MESSENGER (Sep. 6, 2013), <https://gadsdenmessenger.com/2013/09/06/possible-changes-in-district-2-polls-bring-opposition/>.

¹¹⁵ See Lisa Rogers Savage, Some Voting Locations Changed, GADSDEN TIMES (May 31, 2014, 9:00PM), <https://www.gadsdentimes.com/news/20140531/some-voting-locations-changed>.

¹¹⁶ See Mary Sell, In Some Counties, Alabama Voters Have Lost a Quarter of Their Polling Places Since 2010, BIRMINGHAM WATCH (Nov. 2, 2018), <https://birminghamwatch.org/counties-alabama-voters-lost-quarter-polling-places-since-2010/>.

In Georgia, school and school board officials, out of widespread fear, removed polling places from schools and even changed state law to make it harder to place voting locations in schools. In Rockdale County, which is 51 percent African American, local election officials moved 10 polling places out of schools for security purposes, eliminating two voting locations in the process.¹¹⁷ During a local hearing about the consolidation, the elections board chair noted that no specific threats drove the change. “It is just the safety of the schools,” he said. “Leaving the schools open and people going in just creates some safety issues. If we go back to Columbine, a lot of things have changed since then. So since the schools are not always closed on election days, this would be the best move for us, to bring them out of the schools and put them in other locations, such as churches. But it was mainly for safety concerns.”¹¹⁸

The drive for closures is even prompting efforts to change state law to make it easier for schools to deny polling places.¹¹⁹ In Fulton County, several school officials, including the school board president, have called to remove voting locations from schools. “With all these shootings it’s scary to have people be able to walk into the schools,” Fulton School Board President Linda Bryant told the *Atlanta Journal-Constitution* in August 2018.¹²⁰ Fears are also alive in nearby Cobb County, which already has 12 fewer voting locations than before *Shelby* — and more potential cuts as the county considers removing more polling places from schools.¹²¹ In Cobb (which has approximately 60 polling places in schools), and Fulton (which has more than 50), the burden on local election officials to find replacement voting locations would be significant. The effort is also especially vexing for Fulton and Cobb Counties, which already close schools on election days to separate voters from students. “We try to accommodate it,” Richard Barron, Fulton County’s elections director told WABE radio. “It’s just going to get to a point where there are areas in the county where we have no options, and we can’t keep consolidating locations.”¹²² Such closures could be devastating for low-income and rural voters, as well as voters of color, who often live in communities with fewer accessible polling places.

The effort to remove polling places from schools was also cited by an election official in Harrison County, Mississippi, a leading closer of polling places.¹²³

¹¹⁷ See Larry Stanford, Rockdale Board of Elections Approves New Precinct Voting Locations, ROCKDALE CITIZEN & NEWTON CITIZEN (Feb. 14, 2018), https://www.rockdalenewtoncitizen.com/news/local/rockdale-changing-some-voting-precinct-locations/article_037a8b97-df6a-5bde-ae1f-ea988621d52e.html; see 2013-2017 American Community Survey 5-Year Estimates, Table B03002, U.S. CENSUS BUREAU (2017), https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B03002&prodType=table.

¹¹⁸ Larry Stanford, Rockdale Board of Elections Approves New Precinct Voting Locations, ROCKDALE CITIZEN & NEWTON CITIZEN (Feb. 14, 2018), https://www.rockdalenewtoncitizen.com/news/local/rockdale-changing-some-voting-precinct-locations/article_037a8b97-df6a-5bde-ae1f-ea988621d52e.html.

¹¹⁹ See Vanessa McCray, Schools No Longer Best Voting Place, Says Fulton School Board, AJC (Aug. 24, 2018), <https://www.ajc.com/news/local-education/schools-longer-best-voting-place-says-fulton-school-board/h0mZmOGxq4Izuv9Cp1tELI/>.

¹²⁰ Vanessa McCray, Schools No Longer Best Voting Place, Says Fulton School Board, AJC (Aug. 24, 2018), <https://www.ajc.com/news/local-education/schools-longer-best-voting-place-says-fulton-school-board/h0mZmOGxq4Izuv9Cp1tELI/>.

¹²¹ See Ross Terrell, School Safety Concerns Starting to Change Metro Atlanta Voting Locations, WABE (Jun. 1, 2018), <https://www.wabe.org/school-safety-concerns-starting-to-change-metro-atlanta-voting-locations/>.

¹²² See Ross Terrell, School Safety Concerns Starting to Change Metro Atlanta Voting Locations, WABE (Jun. 1, 2018), <https://www.wabe.org/school-safety-concerns-starting-to-change-metro-atlanta-voting-locations/>.

¹²³ See Anna Wolfe & Alex Rozier, Free From Federal Oversight, 5 Percent of Mississippi Polling Locations Have Closed Since 2013, MISS. TODAY (Oct. 24, 2018), <https://mississippitoday.org/2018/10/24/free-from-federal-oversight-5-percent-of-mississippi-polling-locations-have-closed-since-2013/>.

**But school safety and voter access
aren't at odds with one another.**

Indeed, it is possible to protect students while ensuring voting rights. One key way is to not hold school on election days — the practice in Fulton and Cobb Counties in Georgia, Richardson County in Texas,¹²⁴ and throughout North Carolina.¹²⁵ A local official in Richardson County, Texas, pointed to the dividends in civic engagement. A city council official in Dallas, meanwhile, told the *Dallas News* that “having Election Day off could also give students an opportunity to go to the polling place with their parents.”¹²⁶

¹²⁴ See Dana Branham & Nanette Light, Richardson ISD Cancels Class on Election Day, Citing Security Risks of Voters in Schools, DALLAS NEWS (Aug. 1, 2018 7:45 PM), <https://www.dallasnews.com/news/education/2018/08/01/richardson-cancels-class-election-day-citing-security-risks-voters-schools>

¹²⁵ See also Billy Ball, Some North Carolina Schools to Close or Change Schedule Due to Election Day Voting, THE PROGRESSIVE PULSE (Nov. 4, 2016), <http://pulse.ncpolicywatch.org/2016/11/04/north-carolina-schools-close-change-schedule-due-election-day-voting/>

¹²⁶ Dana Branham & Nanette Light, Richardson ISD Cancels Class on Election Day, Citing Security Risks of Voters in Schools, DALLAS NEWS (Aug. 1, 2018 7:45 PM), <https://www.dallasnews.com/news/education/2018/08/01/richardson-cancels-class-election-day-citing-security-risks-voters-schools>





Best Practices

South Carolina stood out for its tradition of keeping polling places open. Of 1,922 polling places that were open in 2012, we found that only 18 have closed — a closure rate of merely .009 percent. We attribute this to state laws requiring multiple local and state elected officials to approve all polling place closures, a conclusion we arrived at through research and interviews with local advocates.

State laws also ensure that changes to polling places are transparent. And they require consensus among local and state elected officials in order to close polling places, which is unique to South Carolina. The South Carolina Code of Laws' section on elections requires that any polling place change from a county election board must also be approved by the county legislative delegation, a body comprising the county's elected representatives to the state legislature. And it also requires that precincts are "designated, fixed, and established by the General Assembly" and signed by the governor.¹²⁷

Yet despite South Carolina's positive steps to ensure an inclusive democracy, a gaping policy hole remains: No racial impact analysis is required, leaving the public without a key way to determine who will or may be harmed by polling place changes. This critical data point must be a determinative factor in the deliberative process.

¹²⁷ S.C. Code § 7-7-10 (2018) (effective June 14, 2000), <https://www.scstatehouse.gov/code/statmast.php>.



Conclusion

Since *Shelby*, the national conversation about barriers to voting in the absence of Section 5 has focused on statewide issues like restrictive voter identification laws, racially discriminatory redistricting plans, and efforts to curtail policies that make voting more accessible, like early voting and same-day registration.

Identifying and describing polling place closures paints a fuller picture about how racial discrimination happens without appropriate oversight. We can fill in more details of this picture about how local decisions greatly impact the ability of communities of color to cast ballots for their candidates of choice.

Next to the ballot itself, the most identifiable element of our democracy's voting process is the polling place. It should — and it must — be accessible to all. When it is not, the barriers to participation can be high. Moving or closing a polling place — particularly without notice or input from communities — disrupts our democracy. It can mean the choice between picking up a child from school or voting. Taking needed overtime or voting. Or taking a bus across town or voting. In a truly inclusive democracy, no one is forced to make these difficult choices.

While there are justifiable reasons for closing polling places, the sheer scale of closures we've identified since *Shelby*, coupled with other, more nakedly racially discriminatory actions to deny voting rights to people of color, demand a response. The federal government must scrutinize these closures — especially in states and localities formerly covered by Section 5.

The best way to do that is to restore the Voting Rights Act, reactivate Section 5, and strengthen its other provisions that require elected officials to seek the input of communities of color and provide notice of any polling place change for any reason.

Methodology

This analysis quantifies the number of Election Day polling places that have closed in jurisdictions once covered by Section 5 of the Voting Rights Act since the *Shelby County v. Holder* decision rendered that provision inoperable in 2013.

This report studies 757 of the approximately 861 counties and county-level equivalents once covered by Section 5. It only includes jurisdictions where The Leadership Conference Education Fund could acquire accurate polling place lists or counts from state or local election officials or reputable media sources for general elections in 2012, 2014, 2016, and/or 2018. Counties where we could not obtain reliable data (Virginia and three from Texas) were excluded from the report.

Data for every county and state (including partially covered states like Florida, New York, California, and South Dakota) are included in the Appendix.

Data were compiled for this report from the following sources:

- Public records requests from state election officials
- Posted lists of polling places on county websites
- Reputable news sources documenting lists of polling places
- The federal Election Assistance Commission's Election Administration and Voting Survey (EAVS)

For all lists of polling places from records requests and posted online, each polling place with a unique address or name was counted. Multiple polling places listed at the same address were counted as one polling place. Counts were conducted multiple times to ensure accuracy for each county.

.....+

For EAVS counts, the survey is voluntarily submitted by state election officials to the EAC and includes questions about how elections are conducted in each state. One of the data points collected in the EAVS is the total number of Election Day physical polling places in each county. The EAVS does not ask for polling place location data that includes addresses or zip codes, so it could not be determined where polling places were closed within counties — only the total number of polling places in each county.

- In EAVS for 2012, 2014, and 2016: The surveys ask three questions to determine the total number of Election Day polling places in Section D under the header “Election Day voting.” Question D2b asks for “Physical polling places other than election offices,” Question D2c asks about “Election offices,” and D2d asks about “Other” and provides a space for comment. The total number of Election Day polling places was determined by totaling the answers for all three questions.
- In EAVS for 2018: In question D4a, the survey asks officials to “report the total number of physical polling places in your jurisdiction for Election Day voting.” It then asks for officials to demonstrate how that total number breaks down between “physical polling places other than election offices (*e.g.*, libraries, schools, mobile voting location)” in question D3b and “polling places that are a part of the election office” for question D4c. For this study, we only used the self-reported total in question D4a. We did use D4b and D4c as well as a comments field to provide context to the total number.

How Analysis was Conducted

Because of the decentralized nature of election administration and vast differences in how or if states and counties manage, share, and make polling place data public, The Education Fund determined which data sources it would rely on and which elections it would compare on a county-by-county basis depending on data quality.

Where possible, we first opted for primary source hand-counts of polling place lists provided directly by state and county election offices and reputable news sources. When those sources were not available, we used EAVS data. We made good faith attempts to include reliable information for every county once covered by Section 5.

Benchmark Elections: For each county, we designated a past general election with the most reliable data to serve as a Benchmark Election. Where possible (709 counties), we used the 2012 general election as this benchmark, the last election to occur pre-*Shelby*. Where reliable information for 2012 could not be acquired, we relied on counts for the 2014 (41 counties) and 2016 (six counties) elections.

Post-*Shelby* Elections: Post-*Shelby* election counts are for the most recent general election in which reliable polling place data could be acquired for a given county. Where possible (in 737 counties), we used 2018, the most recent election prior to the publication of this report. Where reliable information for 2018 could not be acquired, we used counts from the 2016 election (20 counties).

In order to determine the number and percentage of polling places closures in each county, we compared the number of Election Day polling places open in a given county in its designated post-*Shelby* election with the number that were open in its Benchmark Election. The election years and data-sources used are marked for each individual county listed in Appendix A.

We also conducted an analysis to understand if the number of polling places fluctuates with turnout differences between midterm and presidential election years. We were concerned that counties in our study may regularly open fewer polling places during midterm election years because of expected lower turnout and therefore impact our results. Our analysis of counties in this study found that not to be the case. Counties in our study generally do not open fewer polling places in midterm election years than in presidential election years.

In every state, local advocates vetted our analysis and provided context for our findings and a sense of what is happening on the ground.

Appendix: Data Set for All Included Counties

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|---------------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| AK | ALEUTIANS EAST | 0 | 0% | 4 | 2012 | Handcount | 4 | 2018 | Handcount | 0 | 4 | Handcount |
| AK | BRISTOL BAY | 0 | 0% | 3 | 2012 | Handcount | 3 | 2018 | Handcount | 0 | 3 | Handcount |
| AK | DENALI | -1 | -20% | 5 | 2012 | Handcount | 4 | 2018 | Handcount | -1 | 5 | Handcount |
| AK | FAIRBANKS NORTH | 0 | 0% | 37 | 2012 | Handcount | 37 | 2018 | Handcount | 0 | 37 | Handcount |
| AK | HAINES | 0 | 0% | 2 | 2012 | Handcount | 2 | 2018 | Handcount | 0 | 2 | Handcount |
| AK | JUNEAU | 0 | 0% | 13 | 2012 | Handcount | 13 | 2018 | Handcount | 0 | 13 | Handcount |
| AK | KENAI PENINSULA | -1 | -4% | 26 | 2012 | Handcount | 25 | 2018 | Handcount | 0 | 25 | Handcount |
| AK | KETCHIKAN GATEWAY | 0 | 0% | 7 | 2012 | Handcount | 7 | 2018 | Handcount | 0 | 7 | Handcount |
| AK | KODIAK ISLAND | 0 | 0% | 9 | 2012 | Handcount | 9 | 2018 | Handcount | -1 | 10 | Handcount |
| AK | LAKE & PENINSULA | 0 | 0% | 8 | 2012 | Handcount | 8 | 2018 | Handcount | 0 | 8 | Handcount |
| AK | MATANUSKA-SUSITNA | 2 | 5% | 39 | 2012 | Handcount | 41 | 2018 | Handcount | 0 | 41 | Handcount |
| AK | MUNICIPALITY OF ANCHORAGE | 2 | 2% | 119 | 2012 | Handcount | 121 | 2018 | Handcount | 13 | 108 | Handcount |
| AK | NORTH SLOPE | 0 | 0% | 9 | 2012 | Handcount | 9 | 2018 | Handcount | 0 | 9 | Handcount |
| AK | NORTHWEST ARCTIC | 0 | 0% | 11 | 2012 | Handcount | 11 | 2018 | Handcount | 0 | 11 | Handcount |
| AK | PETERSBURG | 0 | 0% | 1 | 2012 | Handcount | 1 | 2018 | Handcount | 0 | 1 | Handcount |
| AK | SITKA | 0 | 0% | 1 | 2012 | Handcount | 1 | 2018 | Handcount | 0 | 1 | Handcount |
| AK | SKAGWAY | 0 | 0% | 1 | 2012 | Handcount | 1 | 2018 | Handcount | 0 | 1 | Handcount |
| AK | WRANGELL | 0 | 0% | 1 | 2012 | Handcount | 1 | 2018 | Handcount | 0 | 1 | Handcount |
| AK | YAKUTAT | 0 | 0% | 1 | 2012 | Handcount | 1 | 2018 | Handcount | 0 | 1 | Handcount |
| AK | UNORGANIZED | -4 | -4% | 93 | 2012 | Handcount | 89 | 2018 | Handcount | -3 | 92 | Handcount |
| AL | AUTAUGA COUNTY | 0 | 0% | 19 | 2012 | Handcount | 19 | 2018 | Handcount | 1 | 18 | Handcount |
| AL | BALDWIN COUNTY | 3 | 7% | 46 | 2012 | Handcount | 49 | 2018 | Handcount | 3 | 46 | Handcount |
| AL | BARBOUR COUNTY | -1 | -6% | 17 | 2012 | Handcount | 16 | 2018 | Handcount | 0 | 16 | Handcount |
| AL | BIBB COUNTY | 0 | 0% | 8 | 2012 | Handcount | 8 | 2018 | Handcount | 0 | 8 | Handcount |
| AL | BLOUNT COUNTY | 0 | 0% | 24 | 2012 | Handcount | 24 | 2018 | Handcount | 0 | 24 | Handcount |
| AL | BULLOCK COUNTY | 0 | 0% | 15 | 2014 | Handcount | 15 | 2018 | Handcount | 0 | 15 | Handcount |
| AL | BUTLER COUNTY | -1 | -5% | 22 | 2014 | Handcount | 21 | 2018 | Handcount | -1 | 22 | Handcount |
| AL | CALHOUN COUNTY | -4 | -8% | 48 | 2012 | Handcount | 44 | 2018 | Handcount | -1 | 45 | Handcount |
| AL | CHAMBERS COUNTY | -1 | -5% | 21 | 2012 | Handcount | 20 | 2018 | Handcount | -1 | 21 | Handcount |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| AL | CHEROKEE COUNTY | 0 | 0% | 23 | 2012 | Handcount | 23 | 2018 | Handcount | 0 | 23 | Handcount |
| AL | CHILTON COUNTY | -2 | -11% | 18 | 2012 | Handcount | 16 | 2018 | Handcount | 0 | 16 | Handcount |
| AL | CHOCTAW COUNTY | -2 | -6% | 32 | 2012 | Handcount | 30 | 2018 | Handcount | -2 | 32 | Handcount |
| AL | CLARKE COUNTY | 2 | 7% | 27 | 2012 | Handcount | 29 | 2018 | Handcount | 0 | 29 | Handcount |
| AL | CLAY COUNTY | 1 | 7% | 14 | 2012 | Handcount | 15 | 2018 | Handcount | 0 | 15 | Handcount |
| AL | CLEBURNE COUNTY | 0 | 0% | 14 | 2012 | Handcount | 14 | 2018 | Handcount | 0 | 14 | Handcount |
| AL | COFFEE COUNTY | 0 | 0% | 29 | 2012 | Handcount | 29 | 2018 | Handcount | 0 | 29 | Handcount |
| AL | COLBERT COUNTY | -1 | -3% | 36 | 2012 | Handcount | 35 | 2018 | Handcount | 0 | 35 | Handcount |
| AL | CONECUH COUNTY | 1 | 4% | 26 | 2012 | Handcount | 27 | 2018 | Handcount | 0 | 27 | Handcount |
| AL | COOSA COUNTY | 0 | 0% | 12 | 2012 | Handcount | 12 | 2018 | Handcount | 0 | 12 | Handcount |
| AL | COVINGTON COUNTY | 0 | 0% | 25 | 2012 | Handcount | 25 | 2018 | Handcount | 0 | 25 | Handcount |
| AL | CRENSHAW COUNTY | 0 | 0% | 18 | 2012 | Handcount | 18 | 2018 | Handcount | 0 | 18 | Handcount |
| AL | CULLMAN COUNTY | 0 | 0% | 49 | 2012 | Handcount | 49 | 2018 | Handcount | 0 | 49 | Handcount |
| AL | DALE COUNTY | 0 | 0% | 19 | 2012 | Handcount | 19 | 2018 | Handcount | 0 | 19 | Handcount |
| AL | DALLAS COUNTY | 2 | 7% | 29 | 2012 | Handcount | 31 | 2018 | Handcount | 2 | 29 | Handcount |
| AL | DEKALB COUNTY | -1 | -2% | 45 | 2012 | Handcount | 44 | 2018 | Handcount | 0 | 44 | Handcount |
| AL | ELMORE COUNTY | 1 | 4% | 28 | 2012 | Handcount | 29 | 2018 | Handcount | 1 | 28 | Handcount |
| AL | ESCAMBIA COUNTY | 0 | 0% | 29 | 2012 | Handcount | 29 | 2018 | Handcount | 0 | 29 | Handcount |
| AL | ETOWAH COUNTY | -9 | -22% | 41 | 2012 | Handcount | 32 | 2018 | Handcount | -1 | 33 | Handcount |
| AL | FAYETTE COUNTY | 0 | 0% | 27 | 2012 | Handcount | 27 | 2018 | Handcount | 0 | 27 | Handcount |
| AL | FRANKLIN COUNTY | -1 | -4% | 24 | 2012 | Handcount | 23 | 2018 | Handcount | -1 | 24 | Handcount |
| AL | GENEVA COUNTY | -1 | -4% | 25 | 2012 | Handcount | 24 | 2018 | Handcount | -1 | 25 | Handcount |
| AL | GREENE COUNTY | 0 | 0% | 14 | 2012 | Handcount | 14 | 2018 | Handcount | 0 | 14 | Handcount |
| AL | HALE COUNTY | 0 | 0% | 14 | 2014 | Handcount | 14 | 2018 | Handcount | 0 | 14 | Handcount |
| AL | HENRY COUNTY | 0 | 0% | 13 | 2012 | Handcount | 13 | 2018 | Handcount | 0 | 13 | Handcount |
| AL | HOUSTON COUNTY | 1 | 4% | 26 | 2012 | Handcount | 27 | 2018 | Handcount | 0 | 27 | Handcount |
| AL | JACKSON COUNTY | 0 | 0% | 37 | 2012 | Handcount | 37 | 2018 | Handcount | 0 | 37 | Handcount |
| AL | JEFFERSON COUNTY | -5 | -3% | 177 | 2012 | Handcount | 172 | 2018 | Handcount | -1 | 173 | Handcount |
| AL | LAMAR COUNTY | 0 | 0% | 22 | 2012 | Handcount | 22 | 2018 | Handcount | 0 | 22 | Handcount |
| AL | LAUDERDALE COUNTY | 0 | 0% | 31 | 2012 | Handcount | 31 | 2018 | Handcount | 0 | 31 | Handcount |
| AL | LAWRENCE COUNTY | 0 | 0% | 29 | 2012 | Handcount | 29 | 2018 | Handcount | 0 | 29 | Handcount |
| AL | LEE COUNTY | 1 | 4% | 23 | 2012 | Handcount | 24 | 2018 | Handcount | 1 | 23 | Handcount |
| AL | LIMESTONE COUNTY | 0 | 0% | 25 | 2012 | Handcount | 25 | 2018 | Handcount | 0 | 25 | Handcount |
| AL | LOWNDES COUNTY | 0 | 0% | 12 | 2012 | Handcount | 12 | 2018 | Handcount | 0 | 12 | Handcount |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| AL | MACON COUNTY | 0 | 0% | 14 | 2012 | Handcount | 14 | 2018 | Handcount | 0 | 14 | Handcount |
| AL | MADISON COUNTY | -4 | -5% | 75 | 2012 | Handcount | 71 | 2018 | Handcount | -1 | 72 | Handcount |
| AL | MARENGO COUNTY | -3 | -14% | 22 | 2012 | Handcount | 19 | 2018 | Handcount | -3 | 22 | Handcount |
| AL | MARION COUNTY | -1 | -5% | 20 | 2012 | Handcount | 19 | 2018 | Handcount | -1 | 20 | Handcount |
| AL | MARSHALL COUNTY | -10 | -26% | 38 | 2012 | Handcount | 28 | 2018 | Handcount | -2 | 30 | Handcount |
| AL | MOBILE COUNTY | -10 | -10% | 98 | 2012 | Handcount | 88 | 2018 | Handcount | 0 | 88 | Handcount |
| AL | MONROE COUNTY | -1 | -3% | 31 | 2012 | Handcount | 30 | 2018 | Handcount | 0 | 30 | Handcount |
| AL | MONTGOMERY COUNTY | 4 | 9% | 46 | 2012 | Handcount | 50 | 2018 | Handcount | 9 | 41 | Handcount |
| AL | MORGAN COUNTY | -5 | -11% | 44 | 2012 | Handcount | 39 | 2018 | Handcount | -1 | 40 | Handcount |
| AL | PERRY COUNTY | 0 | 0% | 12 | 2012 | Handcount | 12 | 2018 | Handcount | 0 | 12 | Handcount |
| AL | PICKENS COUNTY | 0 | 0% | 19 | 2012 | Handcount | 19 | 2018 | Handcount | 0 | 19 | Handcount |
| AL | PIKE COUNTY | 1 | 4% | 28 | 2012 | Handcount | 29 | 2018 | Handcount | 0 | 29 | Handcount |
| AL | RANDOLPH COUNTY | -1 | -4% | 23 | 2012 | Handcount | 22 | 2018 | Handcount | -1 | 23 | Handcount |
| AL | RUSSELL COUNTY | 0 | 0% | 17 | 2012 | Handcount | 17 | 2018 | Handcount | 0 | 17 | Handcount |
| AL | SHELBY COUNTY | -3 | -6% | 47 | 2012 | Handcount | 44 | 2018 | Handcount | -3 | 47 | Handcount |
| AL | ST. CLAIR COUNTY | -1 | -3% | 31 | 2012 | Handcount | 30 | 2018 | Handcount | -1 | 31 | Handcount |
| AL | SUMTER COUNTY | 0 | 0% | 13 | 2012 | Handcount | 13 | 2018 | Handcount | 0 | 13 | Handcount |
| AL | TALLADEGA COUNTY | 0 | 0% | 26 | 2012 | Handcount | 26 | 2018 | Handcount | 0 | 26 | Handcount |
| AL | TALLAPOOSA COUNTY | 1 | 4% | 25 | 2012 | Handcount | 26 | 2018 | Handcount | 0 | 26 | Handcount |
| AL | TUSCALOOSA COUNTY | 0 | 0% | 54 | 2012 | Handcount | 54 | 2018 | Handcount | 0 | 54 | Handcount |
| AL | WALKER COUNTY | 0 | 0% | 45 | 2012 | Handcount | 45 | 2018 | Handcount | 0 | 45 | Handcount |
| AL | WASHINGTON COUNTY | 3 | 18% | 17 | 2012 | Handcount | 20 | 2018 | Handcount | 1 | 19 | Handcount |
| AL | WILCOX COUNTY | -4 | -15% | 26 | 2014 | Handcount | 22 | 2018 | Handcount | -4 | 26 | Handcount |
| AL | WINSTON COUNTY | 0 | 0% | 18 | 2012 | Handcount | 18 | 2018 | Handcount | 0 | 18 | Handcount |
| AZ | APACHE COUNTY | 1 | 2% | 42 | 2012 | EAVS | 43 | 2018 | Handcount | 0 | 43 | EAVS |
| AZ | COCHISE COUNTY | -32 | -65% | 49 | 2012 | EAVS | 17 | 2018 | Handcount | -32 | 49 | EAVS |
| AZ | COCONINO COUNTY | -9 | -14% | 64 | 2012 | EAVS | 55 | 2018 | Handcount | -9 | 64 | EAVS |
| AZ | GILA COUNTY | -16 | -48% | 33 | 2012 | EAVS | 17 | 2018 | Handcount | N/A | N/A | N/A |
| AZ | GRAHAM COUNTY | -9 | -50% | 18 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| AZ | GREENLEE COUNTY | -3 | -38% | 8 | 2012 | EAVS | 5 | 2018 | Handcount | -3 | 8 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|---------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| AZ | LA PAZ COUNTY | -1 | -11% | 9 | 2012 | EAVS | 8 | 2018 | Handcount | -1 | 9 | EAVS |
| AZ | MARICOPA COUNTY | -171 | -25% | 671 | 2012 | Handcount | 500 | 2018 | Handcount | -149 | 649 | Handcount |
| AZ | MOHAVE COUNTY | -34 | -49% | 70 | 2012 | EAVS | 36 | 2018 | Handcount | -30 | 66 | EAVS |
| AZ | NAVAJO COUNTY | -2 | -4% | 52 | 2012 | EAVS | 50 | 2018 | Handcount | 11 | 39 | EAVS |
| AZ | PIMA COUNTY | -31 | -11% | 280 | 2012 | EAVS | 249 | 2018 | Handcount | 7 | 242 | EAVS |
| AZ | PINAL COUNTY | 2 | 2% | 98 | 2012 | EAVS | 100 | 2018 | Handcount | 3 | 97 | EAVS |
| AZ | SANTA CRUZ COUNTY | -5 | -29% | 17 | 2012 | EAVS | 12 | 2018 | Handcount | -5 | 17 | EAVS |
| AZ | YAVAPAI COUNTY | -5 | -17% | 30 | 2012 | EAVS | 25 | 2018 | Handcount | -5 | 30 | EAVS |
| AZ | YUMA COUNTY | -2 | -18% | 11 | 2012 | EAVS | 9 | 2018 | Handcount | -1 | 10 | EAVS |
| CA | KINGS COUNTY | -13 | -37% | 35 | 2012 | EAVS | 22 | 2018 | Handcount | -13 | 35 | EAVS |
| CA | MONTEREY COUNTY | 0 | 0% | 83 | 2012 | EAVS | 83 | 2018 | Handcount | -1 | 84 | EAVS |
| CA | YUBA COUNTY | -7 | -26% | 27 | 2012 | EAVS | 20 | 2018 | EAVS | -6 | 26 | EAVS |
| FL | COLLIER COUNTY | -1 | -2% | 60 | 2012 | Handcount | 59 | 2018 | Handcount | 2 | 57 | Handcount |
| FL | HARDEE COUNTY | 1 | 8% | 12 | 2012 | Handcount | 13 | 2016 | Handcount | 1 | 12 | Handcount |
| FL | HENDRY COUNTY | 0 | 0% | 10 | 2012 | Handcount | 10 | 2018 | Handcount | 0 | 10 | Handcount |
| FL | HILLSBOROUGH COUNTY | -19 | -7% | 276 | 2012 | EAVS | 257 | 2018 | Handcount | -22 | 279 | EAVS |
| FL | MONROE COUNTY | -2 | -7% | 29 | 2012 | Handcount | 27 | 2018 | Handcount | -3 | 30 | Handcount |
| GA | APPLING COUNTY | -7 | -44% | 16 | 2012 | AJC | 9 | 2018 | AJC | -5 | 14 | AJC |
| GA | ATKINSON COUNTY | 0 | 0% | 4 | 2012 | AJC | 4 | 2018 | AJC | 0 | 4 | AJC |
| GA | BACON COUNTY | -4 | -80% | 5 | 2012 | AJC | 1 | 2018 | AJC | -4 | 5 | AJC |
| GA | BAKER COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | BALDWIN COUNTY | 0 | 0% | 14 | 2012 | AJC | 14 | 2018 | AJC | 0 | 14 | AJC |
| GA | BANKS COUNTY | 0 | 0% | 13 | 2012 | AJC | 13 | 2018 | AJC | 0 | 13 | AJC |
| GA | BARROW COUNTY | 0 | 0% | 16 | 2012 | AJC | 16 | 2018 | AJC | 0 | 16 | AJC |
| GA | BARTOW COUNTY | -1 | -6% | 17 | 2012 | AJC | 16 | 2018 | AJC | -1 | 17 | AJC |
| GA | BEN HILL COUNTY | -3 | -60% | 5 | 2012 | AJC | 2 | 2018 | AJC | 0 | 2 | AJC |
| GA | BERRIEN COUNTY | -2 | -29% | 7 | 2012 | AJC | 5 | 2018 | AJC | -2 | 7 | AJC |
| GA | BIBB COUNTY | -9 | -23% | 40 | 2012 | AJC | 31 | 2018 | AJC | -9 | 40 | AJC |
| GA | BLECKLEY COUNTY | 0 | 0% | 1 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | BRANTLEY COUNTY | -6 | -67% | 9 | 2012 | AJC | 3 | 2018 | AJC | 0 | 3 | AJC |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|----------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| GA | BROOKS COUNTY | -2 | -22% | 9 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | BRYAN COUNTY | 0 | 0% | 10 | 2012 | AJC | 10 | 2018 | AJC | 0 | 10 | AJC |
| GA | BULLOCH COUNTY | 0 | 0% | 16 | 2012 | AJC | 16 | 2018 | AJC | 0 | 16 | AJC |
| GA | BURKE COUNTY | 0 | 0% | 16 | 2012 | AJC | 16 | 2018 | AJC | 0 | 16 | AJC |
| GA | BUTTS COUNTY | -4 | -80% | 5 | 2012 | AJC | 1 | 2018 | AJC | -4 | 5 | AJC |
| GA | CALHOUN COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | CAMDEN COUNTY | 0 | 0% | 14 | 2012 | AJC | 14 | 2018 | AJC | 0 | 14 | AJC |
| GA | CANDLER COUNTY | 0 | 0% | 2 | 2012 | AJC | 2 | 2018 | AJC | 0 | 2 | AJC |
| GA | CARROLL COUNTY | -2 | -7% | 30 | 2012 | AJC | 28 | 2018 | AJC | -2 | 30 | AJC |
| GA | CATOOSA COUNTY | -1 | -8% | 12 | 2012 | AJC | 11 | 2018 | AJC | 0 | 11 | AJC |
| GA | CHARLTON COUNTY | -1 | -11% | 9 | 2012 | AJC | 8 | 2018 | AJC | -1 | 9 | AJC |
| GA | CHATHAM COUNTY | 1 | 1% | 89 | 2012 | AJC | 90 | 2018 | AJC | 1 | 89 | AJC |
| GA | CHATTAHOOCHEE COUNTY | 0 | 0% | 1 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | CHATTOOGA COUNTY | 2 | 18% | 11 | 2012 | AJC | 13 | 2018 | AJC | 1 | 12 | AJC |
| GA | CHEROKEE COUNTY | 0 | 0% | 42 | 2012 | AJC | 42 | 2018 | AJC | 0 | 42 | AJC |
| GA | CLARKE COUNTY | 0 | 0% | 24 | 2012 | AJC | 24 | 2018 | AJC | 0 | 24 | AJC |
| GA | CLAY COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | CLAYTON COUNTY | 0 | 0% | 58 | 2012 | AJC | 58 | 2018 | AJC | 0 | 58 | AJC |
| GA | CLINCH COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | COBB COUNTY | -12 | -8% | 153 | 2012 | AJC | 141 | 2018 | AJC | -4 | 145 | AJC |
| GA | COFFEE COUNTY | 0 | 0% | 6 | 2012 | AJC | 6 | 2018 | AJC | 0 | 6 | AJC |
| GA | COLQUITT COUNTY | 0 | 0% | 19 | 2012 | AJC | 19 | 2018 | AJC | 0 | 19 | AJC |
| GA | COLUMBIA COUNTY | 0 | 0% | 42 | 2012 | AJC | 42 | 2018 | AJC | -3 | 45 | AJC |
| GA | COOK COUNTY | 0 | 0% | 8 | 2012 | AJC | 8 | 2018 | AJC | 0 | 8 | AJC |
| GA | COWETA COUNTY | -1 | -4% | 28 | 2012 | AJC | 27 | 2018 | AJC | -1 | 28 | AJC |
| GA | CRAWFORD COUNTY | 0 | 0% | 6 | 2012 | AJC | 6 | 2018 | AJC | 0 | 6 | AJC |
| GA | CRISP COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | DADE COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | DAWSON COUNTY | 0 | 0% | 3 | 2012 | AJC | 3 | 2018 | AJC | 0 | 3 | AJC |
| GA | DECATUR COUNTY | 0 | 0% | 9 | 2012 | AJC | 9 | 2018 | AJC | 0 | 9 | AJC |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| GA | DEKALB COUNTY | 3 | 2% | 189 | 2012 | AJC | 192 | 2018 | AJC | 3 | 189 | AJC |
| GA | DODGE COUNTY | 0 | 0% | 16 | 2012 | AJC | 16 | 2018 | AJC | 0 | 16 | AJC |
| GA | DOOLY COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | DOUGHERTY COUNTY | 0 | 0% | 28 | 2012 | AJC | 28 | 2018 | AJC | 0 | 28 | AJC |
| GA | DOUGLAS COUNTY | 0 | 0% | 25 | 2012 | AJC | 25 | 2018 | AJC | 0 | 25 | AJC |
| GA | EARLY COUNTY | -6 | -55% | 11 | 2012 | AJC | 5 | 2018 | AJC | -6 | 11 | AJC |
| GA | ECHOLS COUNTY | 0 | 0% | 1 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | EFFINGHAM COUNTY | 0 | 0% | 17 | 2012 | AJC | 17 | 2018 | AJC | 0 | 17 | AJC |
| GA | ELBERT COUNTY | 0 | 0% | 11 | 2012 | AJC | 11 | 2018 | AJC | 0 | 11 | AJC |
| GA | EMANUEL COUNTY | -1 | -8% | 12 | 2012 | AJC | 11 | 2018 | AJC | -1 | 12 | AJC |
| GA | EVANS COUNTY | 0 | 0% | 1 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | FANNIN COUNTY | 0 | 0% | 12 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | FAYETTE COUNTY | 0 | 0% | 36 | 2012 | AJC | 36 | 2018 | AJC | 0 | 36 | AJC |
| GA | FLOYD COUNTY | 0 | 0% | 25 | 2012 | AJC | 25 | 2018 | AJC | 0 | 25 | AJC |
| GA | FORSYTH COUNTY | -9 | -36% | 25 | 2012 | AJC | 16 | 2018 | AJC | 0 | 16 | AJC |
| GA | FRANKLIN COUNTY | -6 | -46% | 13 | 2012 | AJC | 7 | 2018 | AJC | -6 | 13 | AJC |
| GA | FULTON COUNTY | 22 | 6% | 351 | 2012 | AJC | 373 | 2018 | AJC | 7 | 366 | AJC |
| GA | GILMER COUNTY | 0 | 0% | 13 | 2012 | AJC | 13 | 2018 | AJC | 0 | 13 | AJC |
| GA | GLASCOCK COUNTY | 0 | 0% | 4 | 2012 | AJC | 4 | 2018 | AJC | 0 | 4 | AJC |
| GA | GLYNN COUNTY | 0 | 0% | 21 | 2012 | AJC | 21 | 2018 | AJC | 0 | 21 | AJC |
| GA | GORDON COUNTY | -1 | -8% | 13 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | GRADY COUNTY | 0 | 0% | 13 | 2012 | AJC | 13 | 2018 | AJC | 0 | 13 | AJC |
| GA | GREENE COUNTY | -3 | -38% | 8 | 2012 | AJC | 5 | 2018 | AJC | -3 | 8 | AJC |
| GA | GWINNETT COUNTY | 1 | 1% | 156 | 2012 | AJC | 157 | 2018 | AJC | 1 | 156 | AJC |
| GA | HABERSHAM COUNTY | -7 | -50% | 14 | 2012 | AJC | 7 | 2018 | AJC | 2 | 5 | AJC |
| GA | HALL COUNTY | -4 | -11% | 35 | 2012 | AJC | 31 | 2018 | AJC | -4 | 35 | AJC |
| GA | HANCOCK COUNTY | 3 | 43% | 7 | 2012 | AJC | 10 | 2018 | AJC | 0 | 10 | AJC |
| GA | HARALSON COUNTY | 0 | 0% | 12 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | HARRIS COUNTY | 0 | 0% | 12 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | HART COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| GA | HEARD COUNTY | -3 | -33% | 9 | 2012 | AJC | 6 | 2018 | AJC | 0 | 6 | AJC |
| GA | HENRY COUNTY | -1 | -3% | 38 | 2012 | AJC | 37 | 2018 | AJC | -1 | 38 | AJC |
| GA | HOUSTON COUNTY | -7 | -30% | 23 | 2012 | AJC | 16 | 2018 | AJC | -3 | 19 | AJC |
| GA | IRWIN COUNTY | -5 | -63% | 8 | 2012 | AJC | 3 | 2018 | AJC | -5 | 8 | AJC |
| GA | JACKSON COUNTY | -12 | -75% | 16 | 2012 | AJC | 4 | 2018 | AJC | -12 | 16 | AJC |
| GA | JASPER COUNTY | -4 | -57% | 7 | 2012 | AJC | 3 | 2018 | AJC | 0 | 3 | AJC |
| GA | JEFF DAVIS COUNTY | 0 | 0% | 9 | 2012 | AJC | 9 | 2018 | AJC | 0 | 9 | AJC |
| GA | JEFFERSON COUNTY | 0 | 0% | 8 | 2012 | AJC | 8 | 2018 | AJC | 0 | 8 | AJC |
| GA | JENKINS COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | JOHNSON COUNTY | 0 | 0% | 4 | 2012 | AJC | 4 | 2018 | AJC | 0 | 4 | AJC |
| GA | JONES COUNTY | -1 | -9% | 11 | 2012 | AJC | 10 | 2018 | AJC | 0 | 10 | AJC |
| GA | LAMAR COUNTY | 0 | 0% | 6 | 2012 | AJC | 6 | 2018 | AJC | 0 | 6 | AJC |
| GA | LANIER COUNTY | -3 | -75% | 4 | 2012 | AJC | 1 | 2018 | AJC | -3 | 4 | AJC |
| GA | LAURENS COUNTY | -1 | -6% | 17 | 2012 | AJC | 16 | 2018 | AJC | -1 | 17 | AJC |
| GA | LEE COUNTY | 0 | 0% | 10 | 2012 | AJC | 10 | 2018 | AJC | 0 | 10 | AJC |
| GA | LIBERTY COUNTY | 0 | 0% | 13 | 2012 | AJC | 13 | 2018 | AJC | 0 | 13 | AJC |
| GA | LINCOLN COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | LONG COUNTY | 2 | 40% | 5 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | LOWNDES COUNTY | -3 | -25% | 12 | 2012 | AJC | 9 | 2018 | AJC | 0 | 9 | AJC |
| GA | LUMPKIN COUNTY | -8 | -89% | 9 | 2012 | AJC | 1 | 2018 | AJC | -6 | 7 | AJC |
| GA | MACON COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | MADISON COUNTY | 0 | 0% | 12 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | MARION COUNTY | -2 | -29% | 7 | 2012 | AJC | 5 | 2018 | AJC | -2 | 7 | AJC |
| GA | MCDUFFIE COUNTY | -1 | -10% | 10 | 2012 | AJC | 9 | 2018 | AJC | -1 | 10 | AJC |
| GA | MCINTOSH COUNTY | 0 | 0% | 6 | 2012 | AJC | 6 | 2018 | AJC | 0 | 6 | AJC |
| GA | MERIWETHER COUNTY | 0 | 0% | 14 | 2012 | AJC | 14 | 2018 | AJC | 0 | 14 | AJC |
| GA | MILLER COUNTY | 0 | 0% | 1 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | MITCHELL COUNTY | 0 | 0% | 11 | 2012 | AJC | 11 | 2018 | AJC | 0 | 11 | AJC |
| GA | MONROE COUNTY | 0 | 0% | 14 | 2012 | AJC | 14 | 2018 | AJC | 0 | 14 | AJC |
| GA | MONTGOMERY COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| GA | MORGAN COUNTY | -4 | -36% | 11 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | MURRAY COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | MUSCOGEE COUNTY | -3 | -11% | 28 | 2012 | AJC | 25 | 2018 | AJC | -2 | 27 | AJC |
| GA | NEWTON COUNTY | 0 | 0% | 22 | 2012 | AJC | 22 | 2018 | AJC | 0 | 22 | AJC |
| GA | OCONEE COUNTY | 0 | 0% | 13 | 2012 | AJC | 13 | 2018 | AJC | 0 | 13 | AJC |
| GA | OGLETHORPE COUNTY | -7 | -70% | 10 | 2012 | AJC | 3 | 2018 | AJC | 0 | 3 | AJC |
| GA | PAULDING COUNTY | -2 | -14% | 14 | 2012 | AJC | 12 | 2018 | AJC | -2 | 14 | AJC |
| GA | PEACH COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | PICKENS COUNTY | 0 | 0% | 12 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | PIERCE COUNTY | 0 | 0% | 8 | 2012 | AJC | 8 | 2018 | AJC | 0 | 8 | AJC |
| GA | PIKE COUNTY | 0 | 0% | 8 | 2012 | AJC | 8 | 2018 | AJC | 0 | 8 | AJC |
| GA | POLK COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | PULASKI COUNTY | -2 | -67% | 3 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | PUTNAM COUNTY | -3 | -38% | 8 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | QUITMAN COUNTY | 0 | 0% | 2 | 2012 | AJC | 2 | 2018 | AJC | 0 | 2 | AJC |
| GA | RABUN COUNTY | 0 | 0% | 1 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | RANDOLPH COUNTY | 0 | 0% | 9 | 2012 | AJC | 9 | 2018 | AJC | 0 | 9 | AJC |
| GA | RICHMOND COUNTY | -9 | -12% | 78 | 2012 | AJC | 69 | 2018 | AJC | 0 | 69 | AJC |
| GA | ROCKDALE COUNTY | -2 | -11% | 18 | 2012 | AJC | 16 | 2018 | AJC | -2 | 18 | AJC |
| GA | SCHLEY COUNTY | 0 | 0% | 1 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | SCREVEN COUNTY | 0 | 0% | 12 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | SEMINOLE COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | SPALDING COUNTY | -3 | -14% | 21 | 2012 | AJC | 18 | 2018 | AJC | -3 | 21 | AJC |
| GA | STEPHENS COUNTY | -7 | -88% | 8 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | STEWART COUNTY | 0 | 0% | 4 | 2012 | AJC | 4 | 2018 | AJC | 0 | 4 | AJC |
| GA | SUMTER COUNTY | 0 | 0% | 11 | 2012 | AJC | 11 | 2018 | AJC | 0 | 11 | AJC |
| GA | TALBOT COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | TALIAFERRO COUNTY | 0 | 0% | 2 | 2012 | AJC | 2 | 2018 | AJC | 0 | 2 | AJC |
| GA | TATTNALL COUNTY | -1 | -11% | 9 | 2012 | AJC | 8 | 2018 | AJC | -1 | 9 | AJC |
| GA | TAYLOR COUNTY | -1 | -25% | 4 | 2012 | AJC | 3 | 2018 | AJC | -1 | 4 | AJC |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| GA | TELFAR COUNTY | 0 | 0% | 6 | 2012 | AJC | 6 | 2018 | AJC | 0 | 6 | AJC |
| GA | TERRELL COUNTY | 0 | 0% | 6 | 2012 | AJC | 6 | 2018 | AJC | 0 | 6 | AJC |
| GA | THOMAS COUNTY | 0 | 0% | 20 | 2012 | AJC | 20 | 2018 | AJC | 0 | 20 | AJC |
| GA | TIFT COUNTY | 0 | 0% | 12 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | TOOMBS COUNTY | -9 | -64% | 14 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | TOWNS COUNTY | 0 | 0% | 4 | 2012 | AJC | 4 | 2018 | AJC | 0 | 4 | AJC |
| GA | TREUTLEN COUNTY | -4 | -67% | 6 | 2012 | AJC | 2 | 2018 | AJC | -4 | 6 | AJC |
| GA | TROUP COUNTY | -1 | -6% | 16 | 2012 | AJC | 15 | 2018 | AJC | 0 | 15 | AJC |
| GA | TURNER COUNTY | 0 | 0% | 3 | 2012 | AJC | 3 | 2018 | AJC | 0 | 3 | AJC |
| GA | TWIGGS COUNTY | 0 | 0% | 5 | 2012 | AJC | 5 | 2018 | AJC | 0 | 5 | AJC |
| GA | UNION COUNTY | 0 | 0% | 11 | 2012 | AJC | 11 | 2018 | AJC | 0 | 11 | AJC |
| GA | UPSON COUNTY | -5 | -56% | 9 | 2012 | AJC | 4 | 2018 | AJC | -5 | 9 | AJC |
| GA | WALKER COUNTY | 0 | 0% | 11 | 2012 | AJC | 11 | 2018 | AJC | 0 | 11 | AJC |
| GA | WALTON COUNTY | 0 | 0% | 21 | 2012 | AJC | 21 | 2018 | AJC | 0 | 21 | AJC |
| GA | WARE COUNTY | 0 | 0% | 12 | 2012 | AJC | 12 | 2018 | AJC | 0 | 12 | AJC |
| GA | WARREN COUNTY | -5 | -83% | 6 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | WASHINGTON COUNTY | 0 | 0% | 8 | 2012 | AJC | 8 | 2018 | AJC | 0 | 8 | AJC |
| GA | WAYNE COUNTY | -3 | -20% | 15 | 2012 | AJC | 12 | 2018 | AJC | -3 | 15 | AJC |
| GA | WEBSTER COUNTY | 0 | 0% | 1 | 2012 | AJC | 1 | 2018 | AJC | 0 | 1 | AJC |
| GA | WHEELER COUNTY | 0 | 0% | 2 | 2012 | AJC | 2 | 2018 | AJC | 0 | 2 | AJC |
| GA | WHITE COUNTY | 0 | 0% | 11 | 2012 | AJC | 11 | 2018 | AJC | 0 | 11 | AJC |
| GA | WHITFIELD COUNTY | 0 | 0% | 23 | 2012 | AJC | 23 | 2018 | AJC | 0 | 23 | AJC |
| GA | WILCOX COUNTY | 0 | 0% | 6 | 2012 | AJC | 6 | 2018 | AJC | 0 | 6 | AJC |
| GA | WILKES COUNTY | 0 | 0% | 7 | 2012 | AJC | 7 | 2018 | AJC | 0 | 7 | AJC |
| GA | WILKINSON COUNTY | 0 | 0% | 9 | 2012 | AJC | 9 | 2018 | AJC | 0 | 9 | AJC |
| GA | WORTH COUNTY | 0 | 0% | 15 | 2012 | AJC | 15 | 2018 | AJC | 0 | 15 | AJC |
| LA | ACADIA PARISH | 0 | 0% | 40 | 2012 | EAVS | 40 | 2018 | Handcount | 0 | 40 | EAVS |
| LA | ALLEN PARISH | -1 | -5% | 22 | 2012 | EAVS | 21 | 2018 | Handcount | -1 | 22 | EAVS |
| LA | ASCENSION PARISH | 3 | 9% | 34 | 2012 | EAVS | 37 | 2018 | Handcount | 0 | 37 | EAVS |
| LA | ASSUMPTION PARISH | -2 | -12% | 17 | 2012 | EAVS | 15 | 2018 | Handcount | -1 | 16 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-------------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| LA | AVOUELLES PARISH | -1 | -4% | 28 | 2012 | EAVS | 27 | 2018 | Handcount | 0 | 27 | EAVS |
| LA | BEAUREGARD PARISH | 0 | 0% | 28 | 2012 | EAVS | 28 | 2018 | Handcount | 0 | 28 | EAVS |
| LA | BIENVILLE PARISH | -3 | -14% | 21 | 2012 | EAVS | 18 | 2018 | Handcount | 0 | 18 | EAVS |
| LA | BOSSIER PARISH | -2 | -4% | 50 | 2012 | EAVS | 48 | 2018 | Handcount | -1 | 49 | EAVS |
| LA | CADDO PARISH | -6 | -7% | 88 | 2012 | EAVS | 82 | 2018 | Handcount | -4 | 86 | EAVS |
| LA | CALCASIEU PARISH | -4 | -5% | 78 | 2012 | EAVS | 74 | 2018 | Handcount | -3 | 77 | EAVS |
| LA | CALDWELL PARISH | 0 | 0% | 12 | 2012 | EAVS | 12 | 2018 | Handcount | 0 | 12 | EAVS |
| LA | CAMERON PARISH | 1 | 13% | 8 | 2012 | EAVS | 9 | 2018 | Handcount | 1 | 8 | EAVS |
| LA | CATAHOULA PARISH | -1 | -6% | 16 | 2012 | EAVS | 15 | 2018 | Handcount | -1 | 16 | EAVS |
| LA | CLAIBORNE PARISH | 0 | 0% | 8 | 2012 | EAVS | 8 | 2018 | Handcount | 0 | 8 | EAVS |
| LA | CONCORDIA PARISH | -1 | -6% | 18 | 2012 | EAVS | 17 | 2018 | Handcount | -1 | 18 | EAVS |
| LA | DE SOTO PARISH | -2 | -7% | 27 | 2012 | EAVS | 25 | 2018 | Handcount | 1 | 24 | EAVS |
| LA | EAST BATON ROUGE PARISH | -10 | -7% | 147 | 2012 | EAVS | 137 | 2018 | Handcount | -8 | 145 | EAVS |
| LA | EAST CARROLL PARISH | -1 | -7% | 14 | 2012 | EAVS | 13 | 2018 | Handcount | -1 | 14 | EAVS |
| LA | EAST FELICIANA PARISH | 0 | 0% | 12 | 2012 | EAVS | 12 | 2018 | Handcount | 0 | 12 | EAVS |
| LA | EVANGELINE PARISH | -3 | -9% | 33 | 2012 | EAVS | 30 | 2018 | Handcount | -1 | 31 | EAVS |
| LA | FRANKLIN PARISH | 0 | 0% | 18 | 2012 | EAVS | 18 | 2018 | Handcount | 0 | 18 | EAVS |
| LA | GRANT PARISH | -1 | -7% | 15 | 2012 | EAVS | 14 | 2018 | Handcount | -1 | 15 | EAVS |
| LA | IBERIA PARISH | 0 | 0% | 41 | 2012 | EAVS | 41 | 2018 | Handcount | 0 | 41 | EAVS |
| LA | IBERVILLE PARISH | -2 | -8% | 25 | 2012 | EAVS | 23 | 2018 | Handcount | -1 | 24 | EAVS |
| LA | JACKSON PARISH | 0 | 0% | 14 | 2012 | EAVS | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| LA | JEFFERSON DAVIS PARISH | -1 | -7% | 15 | 2012 | EAVS | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| LA | JEFFERSON PARISH | -25 | -15% | 170 | 2012 | EAVS | 145 | 2018 | Handcount | -24 | 169 | EAVS |
| LA | LAFAYETTE PARISH | -10 | -17% | 58 | 2012 | EAVS | 48 | 2018 | Handcount | 1 | 47 | EAVS |
| LA | LAFOURCHE PARISH | -1 | -2% | 48 | 2012 | EAVS | 47 | 2018 | Handcount | 0 | 47 | EAVS |
| LA | LASALLE PARISH | -1 | -4% | 23 | 2012 | EAVS | 22 | 2018 | Handcount | 0 | 22 | EAVS |
| LA | LINCOLN PARISH | -2 | -8% | 26 | 2012 | EAVS | 24 | 2018 | Handcount | -1 | 25 | EAVS |
| LA | LIVINGSTON PARISH | -1 | -3% | 37 | 2012 | EAVS | 36 | 2018 | Handcount | -2 | 38 | EAVS |
| LA | MADISON PARISH | 0 | 0% | 16 | 2012 | EAVS | 16 | 2018 | Handcount | 0 | 16 | EAVS |
| LA | MOREHOUSE PARISH | -3 | -14% | 21 | 2012 | EAVS | 18 | 2018 | Handcount | -1 | 19 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-------------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| LA | NATCHITOCHE PARISH | -1 | -2% | 42 | 2012 | EAVS | 41 | 2018 | Handcount | -1 | 42 | EAVS |
| LA | ORLEANS PARISH | -5 | -4% | 129 | 2012 | EAVS | 124 | 2018 | Handcount | 0 | 124 | EAVS |
| LA | OUACHITA PARISH | -1 | -2% | 50 | 2012 | EAVS | 49 | 2018 | Handcount | -1 | 50 | EAVS |
| LA | PLAQUEMINES PARISH | -1 | -10% | 10 | 2012 | EAVS | 9 | 2018 | Handcount | -1 | 10 | EAVS |
| LA | POINTE COUPEE PARISH | -2 | -10% | 21 | 2012 | EAVS | 19 | 2018 | Handcount | 0 | 19 | EAVS |
| LA | RAPIDES PARISH | -1 | -1% | 69 | 2012 | EAVS | 68 | 2018 | Handcount | -1 | 69 | EAVS |
| LA | RED RIVER PARISH | -1 | -8% | 13 | 2012 | EAVS | 12 | 2018 | Handcount | -1 | 13 | EAVS |
| LA | RICHLAND PARISH | -1 | -6% | 17 | 2012 | EAVS | 16 | 2018 | Handcount | 0 | 16 | EAVS |
| LA | SABINE PARISH | -2 | -7% | 30 | 2012 | EAVS | 28 | 2018 | Handcount | -1 | 29 | EAVS |
| LA | ST. BERNARD PARISH | 0 | 0% | 10 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| LA | ST. CHARLES PARISH | -3 | -12% | 26 | 2012 | EAVS | 23 | 2018 | Handcount | -1 | 24 | EAVS |
| LA | ST. HELENA PARISH | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| LA | ST. JAMES PARISH | -1 | -8% | 13 | 2012 | EAVS | 12 | 2018 | Handcount | -1 | 13 | EAVS |
| LA | ST. JOHN THE BAPTIST PA | 0 | 0% | 15 | 2012 | EAVS | 15 | 2018 | Handcount | -1 | 16 | EAVS |
| LA | ST. LANDRY PARISH | -3 | -5% | 59 | 2012 | EAVS | 56 | 2018 | Handcount | -1 | 57 | EAVS |
| LA | ST. MARTIN PARISH | -3 | -10% | 31 | 2012 | EAVS | 28 | 2018 | Handcount | -3 | 31 | EAVS |
| LA | ST. MARY PARISH | 0 | 0% | 45 | 2012 | EAVS | 45 | 2018 | Handcount | 0 | 45 | EAVS |
| LA | ST. TAMMANY PARISH | 3 | 5% | 61 | 2012 | EAVS | 64 | 2018 | Handcount | -1 | 65 | EAVS |
| LA | TANGIPAHOA PARISH | 0 | 0% | 38 | 2012 | EAVS | 38 | 2018 | Handcount | -1 | 39 | EAVS |
| LA | TENSAS PARISH | -1 | -11% | 9 | 2012 | EAVS | 8 | 2018 | Handcount | -1 | 9 | EAVS |
| LA | TERREBONNE PARISH | -7 | -12% | 57 | 2012 | EAVS | 50 | 2018 | Handcount | -3 | 53 | EAVS |
| LA | UNION PARISH | -1 | -5% | 22 | 2012 | EAVS | 21 | 2018 | Handcount | -1 | 22 | EAVS |
| LA | VERMILION PARISH | -2 | -7% | 30 | 2012 | EAVS | 28 | 2018 | Handcount | -2 | 30 | EAVS |
| LA | VERNON PARISH | 0 | 0% | 30 | 2012 | EAVS | 30 | 2018 | Handcount | 0 | 30 | EAVS |
| LA | WASHINGTON PARISH | 0 | 0% | 27 | 2012 | EAVS | 27 | 2018 | Handcount | 0 | 27 | EAVS |
| LA | WEBSTER PARISH | 0 | 0% | 17 | 2012 | EAVS | 17 | 2018 | Handcount | 0 | 17 | EAVS |
| LA | WEST BATON ROUGE PARISH | -1 | -6% | 16 | 2012 | EAVS | 15 | 2018 | Handcount | -1 | 16 | EAVS |
| LA | WEST CARROLL PARISH | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| LA | WEST FELICIANA PARISH | 0 | 0% | 12 | 2012 | EAVS | 12 | 2018 | Handcount | 0 | 12 | EAVS |
| LA | WINN PARISH | -5 | -24% | 21 | 2012 | EAVS | 16 | 2018 | Handcount | -1 | 17 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| MS | ADAMS COUNTY | -1 | -5% | 20 | 2012 | Handcount | 19 | 2018 | Handcount | 0 | 19 | Handcount |
| MS | ALCORN COUNTY | 0 | 0% | 17 | 2014 | Handcount | 17 | 2018 | Handcount | 0 | 17 | Handcount |
| MS | AMITE COUNTY | 0 | 0% | 21 | 2012 | Handcount | 21 | 2018 | Handcount | 0 | 21 | EAVS |
| MS | ATTALA COUNTY | 0 | 0% | 20 | 2012 | Handcount | 20 | 2018 | Handcount | 1 | 19 | Handcount |
| MS | BENTON COUNTY | 0 | 0% | 5 | 2014 | Handcount | 5 | 2018 | Handcount | 0 | 5 | Handcount |
| MS | BOLIVAR COUNTY | -1 | -3% | 29 | 2012 | Handcount | 28 | 2018 | Handcount | 0 | 28 | Handcount |
| MS | CALHOUN COUNTY | 0 | 0% | 10 | 2012 | Handcount | 10 | 2018 | Handcount | 0 | 10 | Handcount |
| MS | CARROLL COUNTY | 0 | 0% | 13 | 2012 | Handcount | 13 | 2018 | Handcount | -1 | 14 | EAVS |
| MS | CHICKASAW COUNTY | 2 | 15% | 13 | 2012 | Handcount | 15 | 2018 | Handcount | 0 | 15 | Handcount |
| MS | CHOCTAW COUNTY | 2 | 15% | 13 | 2012 | EAVS | 15 | 2018 | Handcount | 2 | 13 | EAVS |
| MS | CLAIBORNE COUNTY | 1 | 11% | 9 | 2012 | Handcount | 10 | 2018 | Handcount | 1 | 9 | Handcount |
| MS | CLARKE COUNTY | 0 | 0% | 23 | 2012 | EAVS | 23 | 2018 | Handcount | 0 | 23 | EAVS |
| MS | CLAY COUNTY | 0 | 0% | 14 | 2012 | EAVS | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| MS | COAHOMA COUNTY | -1 | -5% | 19 | 2014 | Handcount | 18 | 2018 | Handcount | -1 | 19 | Handcount |
| MS | COPIAH COUNTY | 0 | 0% | 19 | 2012 | Handcount | 19 | 2018 | Handcount | -1 | 20 | EAVS |
| MS | COVINGTON COUNTY | -2 | -11% | 18 | 2012 | EAVS | 16 | 2018 | Handcount | -2 | 18 | EAVS |
| MS | DESOTO COUNTY | 3 | 8% | 38 | 2012 | Handcount | 41 | 2018 | Handcount | 2 | 39 | EAVS |
| MS | FORREST COUNTY | -1 | -3% | 35 | 2014 | Handcount | 34 | 2018 | Handcount | -1 | 35 | Handcount |
| MS | FRANKLIN COUNTY | 0 | 0% | 14 | 2012 | EAVS | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| MS | GEORGE COUNTY | 0 | 0% | 22 | 2012 | EAVS | 22 | 2018 | Handcount | 0 | 22 | EAVS |
| MS | GREENE COUNTY | 0 | 0% | 13 | 2012 | Handcount | 13 | 2018 | Handcount | -1 | 14 | EAVS |
| MS | GRENADA COUNTY | 0 | 0% | 12 | 2014 | Handcount | 12 | 2018 | Handcount | 0 | 12 | Handcount |
| MS | HANCOCK COUNTY | 0 | 0% | 25 | 2014 | Handcount | 25 | 2018 | Handcount | 0 | 25 | Handcount |
| MS | HARRISON COUNTY | -13 | -20% | 66 | 2012 | EAVS | 53 | 2018 | Handcount | N/A | N/A | N/A |
| MS | HINDS COUNTY | -8 | -7% | 118 | 2012 | Handcount | 110 | 2018 | Handcount | N/A | N/A | N/A |
| MS | HOLMES COUNTY | 0 | 0% | 17 | 2012 | Handcount | 17 | 2018 | Handcount | 0 | 17 | Handcount |
| MS | HUMPHREYS COUNTY | 0 | 0% | 13 | 2012 | Handcount | 13 | 2018 | Handcount | 0 | 13 | Handcount |
| MS | ISSAQUENA COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | Handcount | 0 | 5 | EAVS |
| MS | ITAWAMBA COUNTY | -3 | -11% | 27 | 2012 | EAVS | 24 | 2018 | Handcount | 0 | 24 | EAVS |
| MS | JACKSON COUNTY | 1 | 3% | 31 | 2012 | EAVS | 32 | 2018 | Handcount | 1 | 31 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|------------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| MS | JASPER COUNTY | -1 | -6% | 18 | 2012 | Handcount | 17 | 2018 | Handcount | 1 | 16 | EAVS |
| MS | JEFFERSON COUNTY | -3 | -20% | 15 | 2012 | Handcount | 12 | 2018 | Handcount | -2 | 14 | Handcount |
| MS | JEFFERSON DAVIS COUNTY | -4 | -19% | 21 | 2014 | Handcount | 17 | 2018 | Handcount | -4 | 21 | Handcount |
| MS | JONES COUNTY | 0 | 0% | 37 | 2014 | Handcount | 37 | 2018 | Handcount | 0 | 37 | Handcount |
| MS | KEMPER COUNTY | 0 | 0% | 14 | 2012 | Handcount | 14 | 2018 | Handcount | 1 | 13 | Handcount |
| MS | LAFAYETTE COUNTY | 0 | 0% | 18 | 2012 | Handcount | 18 | 2018 | Handcount | 0 | 18 | EAVS |
| MS | LAMAR COUNTY | 2 | 10% | 21 | 2014 | Handcount | 23 | 2018 | Handcount | 2 | 21 | Handcount |
| MS | LAUDERDALE COUNTY | -9 | -18% | 49 | 2012 | EAVS | 40 | 2018 | Handcount | -3 | 43 | EAVS |
| MS | LAWRENCE COUNTY | -2 | -8% | 26 | 2014 | Handcount | 24 | 2018 | Handcount | -2 | 26 | Handcount |
| MS | LEAKE COUNTY | 0 | 0% | 19 | 2012 | Handcount | 19 | 2018 | Handcount | 0 | 19 | Handcount |
| MS | LEE COUNTY | -2 | -5% | 38 | 2014 | Handcount | 36 | 2018 | Handcount | -2 | 38 | Handcount |
| MS | LEFLORE COUNTY | -1 | -5% | 19 | 2012 | Handcount | 18 | 2018 | Handcount | -1 | 19 | Handcount |
| MS | LINCOLN COUNTY | -2 | -6% | 32 | 2012 | Handcount | 30 | 2018 | Handcount | N/A | N/A | N/A |
| MS | LOWNDES COUNTY | -1 | -5% | 22 | 2012 | Handcount | 21 | 2018 | Handcount | -1 | 22 | EAVS |
| MS | MADISON COUNTY | -1 | -2% | 43 | 2014 | Handcount | 42 | 2018 | Handcount | -1 | 43 | Handcount |
| MS | MARION COUNTY | -2 | -8% | 24 | 2012 | EAVS | 22 | 2018 | Handcount | -1 | 23 | EAVS |
| MS | MARSHALL COUNTY | 0 | 0% | 24 | 2012 | Handcount | 24 | 2018 | Handcount | 0 | 24 | Handcount |
| MS | MONROE COUNTY | 0 | 0% | 26 | 2012 | EAVS | 26 | 2018 | Handcount | 0 | 26 | EAVS |
| MS | MONTGOMERY COUNTY | -1 | -6% | 16 | 2012 | Handcount | 15 | 2018 | Handcount | 0 | 15 | EAVS |
| MS | NESHOBA COUNTY | 0 | 0% | 27 | 2012 | Handcount | 27 | 2018 | Handcount | 0 | 27 | Handcount |
| MS | NEWTON COUNTY | -3 | -16% | 19 | 2012 | Handcount | 16 | 2018 | Handcount | N/A | N/A | N/A |
| MS | NOXUBEE COUNTY | -2 | -20% | 10 | 2012 | Handcount | 8 | 2018 | Handcount | -2 | 10 | Handcount |
| MS | OKTIBBEHA COUNTY | 0 | 0% | 20 | 2012 | Handcount | 20 | 2018 | Handcount | -1 | 21 | EAVS |
| MS | PANOLA COUNTY | -2 | -8% | 24 | 2012 | Handcount | 22 | 2018 | Handcount | -2 | 24 | Handcount |
| MS | PEARL RIVER COUNTY | -13 | -39% | 33 | 2012 | Handcount | 20 | 2018 | Handcount | -13 | 33 | Handcount |
| MS | PERRY COUNTY | 0 | 0% | 15 | 2012 | Handcount | 15 | 2018 | Handcount | -1 | 16 | EAVS |
| MS | PIKE COUNTY | 0 | 0% | 25 | 2014 | Handcount | 25 | 2018 | Handcount | 0 | 25 | Handcount |
| MS | PONTOTOC COUNTY | -1 | -3% | 29 | 2012 | Handcount | 28 | 2018 | Handcount | 0 | 28 | EAVS |
| MS | PRENTISS COUNTY | 0 | 0% | 15 | 2012 | EAVS | 15 | 2018 | Handcount | 0 | 15 | EAVS |
| MS | QUITMAN COUNTY | 1 | 11% | 9 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|---------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| MS | RANKIN COUNTY | -4 | -8% | 53 | 2012 | EAVS | 49 | 2018 | Handcount | -1 | 50 | EAVS |
| MS | SCOTT COUNTY | -2 | -8% | 25 | 2014 | Handcount | 23 | 2018 | Handcount | -2 | 25 | Handcount |
| MS | SHARKEY COUNTY | 0 | 0% | 10 | 2012 | EAVS | 10 | 2018 | Handcount | N/A | N/A | N/A |
| MS | SIMPSON COUNTY | 0 | 0% | 23 | 2014 | Handcount | 23 | 2018 | Handcount | 0 | 23 | Handcount |
| MS | SMITH COUNTY | 0 | 0% | 18 | 2012 | EAVS | 18 | 2018 | Handcount | N/A | N/A | N/A |
| MS | STONE COUNTY | 0 | 0% | 15 | 2012 | EAVS | 15 | 2018 | Handcount | 0 | 15 | EAVS |
| MS | SUNFLOWER COUNTY | 0 | 0% | 17 | 2014 | Handcount | 17 | 2018 | Handcount | 0 | 17 | Handcount |
| MS | TALLAHATCHIE COUNTY | 0 | 0% | 21 | 2012 | Handcount | 21 | 2018 | Handcount | 0 | 21 | Handcount |
| MS | TATE COUNTY | 1 | 5% | 19 | 2012 | Handcount | 20 | 2018 | Handcount | 0 | 20 | EAVS |
| MS | TIPPAH COUNTY | 0 | 0% | 24 | 2012 | EAVS | 24 | 2018 | Handcount | 0 | 24 | EAVS |
| MS | TISHOMINGO COUNTY | -5 | -26% | 19 | 2012 | Handcount | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| MS | TUNICA COUNTY | 0 | 0% | 12 | 2014 | Handcount | 12 | 2018 | Handcount | 0 | 12 | Handcount |
| MS | UNION COUNTY | 0 | 0% | 20 | 2014 | Handcount | 20 | 2018 | Handcount | 0 | 20 | Handcount |
| MS | WALTHALL COUNTY | -1 | -5% | 21 | 2012 | Handcount | 20 | 2018 | Handcount | -1 | 21 | Handcount |
| MS | WARREN COUNTY | 1 | 5% | 22 | 2012 | Handcount | 23 | 2018 | Handcount | 1 | 22 | Handcount |
| MS | WASHINGTON COUNTY | 0 | 0% | 19 | 2012 | Handcount | 19 | 2018 | Handcount | 0 | 19 | Handcount |
| MS | WAYNE COUNTY | 0 | 0% | 22 | 2014 | EAVS | 22 | 2018 | Handcount | 0 | 22 | EAVS |
| MS | WEBSTER COUNTY | 0 | 0% | 17 | 2012 | Handcount | 17 | 2018 | Handcount | 0 | 17 | EAVS |
| MS | WILKINSON COUNTY | 0 | 0% | 9 | 2014 | Handcount | 9 | 2018 | Handcount | 0 | 9 | Handcount |
| MS | WINSTON COUNTY | 0 | 0% | 12 | 2012 | EAVS | 12 | 2018 | Handcount | 0 | 12 | EAVS |
| MS | YALOBUSHA COUNTY | -2 | -15% | 13 | 2012 | EAVS | 11 | 2018 | Handcount | N/A | N/A | N/A |
| MS | YAZOO COUNTY | -2 | -8% | 25 | 2012 | Handcount | 23 | 2018 | Handcount | -2 | 25 | Handcount |
| NC | ANSON COUNTY | 0 | 0% | 11 | 2012 | Handcount | 11 | 2018 | Handcount | 0 | 11 | Handcount |
| NC | BEAUFORT COUNTY | 0 | 0% | 20 | 2012 | Handcount | 20 | 2018 | Handcount | 0 | 20 | Handcount |
| NC | BERTIE COUNTY | 0 | 0% | 11 | 2012 | Handcount | 11 | 2018 | Handcount | 0 | 11 | Handcount |
| NC | BLADEN COUNTY | 0 | 0% | 17 | 2012 | Handcount | 17 | 2018 | Handcount | 0 | 17 | Handcount |
| NC | CAMDEN COUNTY | 0 | 0% | 3 | 2012 | Handcount | 3 | 2018 | Handcount | 0 | 3 | Handcount |
| NC | CASWELL COUNTY | -1 | -10% | 10 | 2012 | Handcount | 9 | 2018 | Handcount | -1 | 10 | Handcount |
| NC | CHOWAN COUNTY | 0 | 0% | 6 | 2012 | Handcount | 6 | 2018 | Handcount | 0 | 6 | Handcount |
| NC | CLEVELAND COUNTY | -5 | -19% | 26 | 2012 | Handcount | 21 | 2018 | Handcount | 0 | 21 | Handcount |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|--------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| NC | CRAVEN COUNTY | -3 | -11% | 27 | 2012 | Handcount | 24 | 2018 | Handcount | -2 | 26 | Handcount |
| NC | CUMBERLAND COUNTY | 0 | 0% | 77 | 2012 | Handcount | 77 | 2018 | Handcount | 0 | 77 | Handcount |
| NC | EDGECOMBE COUNTY | 0 | 0% | 21 | 2012 | Handcount | 21 | 2018 | Handcount | 0 | 21 | Handcount |
| NC | FRANKLIN COUNTY | 0 | 0% | 18 | 2012 | Handcount | 18 | 2018 | Handcount | 0 | 18 | Handcount |
| NC | GASTON COUNTY | 0 | 0% | 46 | 2012 | Handcount | 46 | 2018 | Handcount | 0 | 46 | Handcount |
| NC | GATES COUNTY | 0 | 0% | 6 | 2012 | Handcount | 6 | 2018 | Handcount | 0 | 6 | Handcount |
| NC | GRANVILLE COUNTY | 0 | 0% | 15 | 2012 | Handcount | 15 | 2018 | Handcount | 0 | 15 | Handcount |
| NC | GREENE COUNTY | 0 | 0% | 10 | 2012 | Handcount | 10 | 2018 | Handcount | 0 | 10 | Handcount |
| NC | GUILFORD COUNTY | 0 | 0% | 165 | 2012 | Handcount | 165 | 2018 | Handcount | 0 | 165 | Handcount |
| NC | HALIFAX COUNTY | -4 | -16% | 25 | 2012 | Handcount | 21 | 2018 | Handcount | -4 | 25 | Handcount |
| NC | HARNETT COUNTY | 1 | 8% | 12 | 2012 | Handcount | 13 | 2018 | Handcount | 0 | 13 | Handcount |
| NC | HERTFORD COUNTY | 0 | 0% | 13 | 2012 | Handcount | 13 | 2018 | Handcount | 0 | 13 | Handcount |
| NC | HOKE COUNTY | 1 | 7% | 14 | 2012 | Handcount | 15 | 2018 | Handcount | 0 | 15 | Handcount |
| NC | JACKSON COUNTY | -1 | -7% | 15 | 2012 | Handcount | 14 | 2018 | Handcount | 0 | 14 | Handcount |
| NC | LEE COUNTY | 0 | 0% | 10 | 2012 | Handcount | 10 | 2018 | Handcount | 0 | 10 | Handcount |
| NC | LENOIR COUNTY | 0 | 0% | 22 | 2012 | Handcount | 22 | 2018 | Handcount | 0 | 22 | Handcount |
| NC | MARTIN COUNTY | -1 | -8% | 12 | 2012 | Handcount | 11 | 2018 | Handcount | 0 | 11 | Handcount |
| NC | NASH COUNTY | -3 | -11% | 27 | 2012 | Handcount | 24 | 2018 | Handcount | -3 | 27 | Handcount |
| NC | NORTHAMPTON COUNTY | 0 | 0% | 18 | 2012 | Handcount | 18 | 2018 | Handcount | 0 | 18 | Handcount |
| NC | ONslow COUNTY | 0 | 0% | 24 | 2012 | Handcount | 24 | 2018 | Handcount | 0 | 24 | Handcount |
| NC | PASQUOTANK COUNTY | -4 | -31% | 13 | 2012 | Handcount | 9 | 2018 | Handcount | -4 | 13 | Handcount |
| NC | PERQUIMANS COUNTY | 0 | 0% | 7 | 2012 | Handcount | 7 | 2018 | Handcount | 0 | 7 | Handcount |
| NC | PERSON COUNTY | -3 | -21% | 14 | 2012 | Handcount | 11 | 2018 | Handcount | -3 | 14 | Handcount |
| NC | PITT COUNTY | 0 | 0% | 40 | 2012 | Handcount | 40 | 2018 | Handcount | 0 | 40 | Handcount |
| NC | ROBESON COUNTY | -4 | -10% | 42 | 2012 | Handcount | 38 | 2018 | Handcount | -1 | 39 | Handcount |
| NC | ROCKINGHAM COUNTY | 0 | 0% | 15 | 2012 | Handcount | 15 | 2018 | Handcount | 0 | 15 | Handcount |
| NC | SCOTLAND COUNTY | 0 | 0% | 10 | 2012 | Handcount | 10 | 2018 | Handcount | 0 | 10 | Handcount |
| NC | UNION COUNTY | 0 | 0% | 52 | 2012 | Handcount | 52 | 2018 | Handcount | 0 | 52 | Handcount |
| NC | VANCE COUNTY | 0 | 0% | 12 | 2012 | Handcount | 12 | 2018 | Handcount | 0 | 12 | Handcount |
| NC | WASHINGTON COUNTY | 0 | 0% | 6 | 2012 | Handcount | 6 | 2018 | Handcount | 0 | 6 | Handcount |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|---------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| NC | WAYNE COUNTY | 0 | 0% | 29 | 2012 | Handcount | 29 | 2018 | Handcount | 0 | 29 | Handcount |
| NC | WILSON COUNTY | 0 | 0% | 24 | 2012 | Handcount | 24 | 2018 | Handcount | 0 | 24 | Handcount |
| NY | BRONX COUNTY | -8 | -4% | 198 | 2016 | EAVS | 190 | 2018 | EAVS | N/A | N/A | N/A |
| NY | KINGS COUNTY | -6 | -1% | 404 | 2016 | EAVS | 398 | 2018 | EAVS | N/A | N/A | N/A |
| NY | NEW YORK COUNTY | 12 | 5% | 265 | 2016 | EAVS | 277 | 2018 | EAVS | N/A | N/A | N/A |
| SC | ABBEVILLE COUNTY | 0 | 0% | 14 | 2012 | Handcount | 14 | 2018 | Handcount | 0 | 14 | Handcount |
| SC | AIKEN COUNTY | 4 | 6% | 69 | 2012 | Handcount | 73 | 2018 | Handcount | 4 | 69 | Handcount |
| SC | ALLENDALE COUNTY | 0 | 0% | 8 | 2012 | Handcount | 8 | 2018 | Handcount | 0 | 8 | Handcount |
| SC | ANDERSON COUNTY | 3 | 4% | 75 | 2012 | Handcount | 78 | 2018 | Handcount | 0 | 78 | Handcount |
| SC | BAMBERG COUNTY | 0 | 0% | 12 | 2012 | Handcount | 12 | 2018 | Handcount | 0 | 12 | Handcount |
| SC | BARNWELL COUNTY | -1 | -10% | 10 | 2012 | Handcount | 9 | 2018 | Handcount | -1 | 10 | Handcount |
| SC | BEAUFORT COUNTY | -1 | -2% | 58 | 2012 | Handcount | 57 | 2018 | Handcount | 0 | 57 | Handcount |
| SC | BERKELEY COUNTY | 7 | 15% | 48 | 2012 | Handcount | 55 | 2018 | Handcount | 8 | 47 | Handcount |
| SC | CALHOUN COUNTY | 0 | 0% | 12 | 2012 | Handcount | 12 | 2018 | Handcount | 0 | 12 | Handcount |
| SC | CHARLESTON COUNTY | -10 | -10% | 105 | 2012 | Handcount | 95 | 2018 | Handcount | -8 | 103 | Handcount |
| SC | CHEROKEE COUNTY | 0 | 0% | 29 | 2012 | Handcount | 29 | 2018 | Handcount | 0 | 29 | Handcount |
| SC | CHESTER COUNTY | 1 | 5% | 20 | 2012 | Handcount | 21 | 2018 | Handcount | 0 | 21 | Handcount |
| SC | CHESTERFIELD COUNTY | 0 | 0% | 25 | 2012 | Handcount | 25 | 2018 | Handcount | 0 | 25 | Handcount |
| SC | CLARENDON COUNTY | 0 | 0% | 25 | 2012 | Handcount | 25 | 2018 | Handcount | 0 | 25 | Handcount |
| SC | COLLETON COUNTY | 1 | 3% | 31 | 2012 | Handcount | 32 | 2018 | Handcount | 0 | 32 | Handcount |
| SC | DARLINGTON COUNTY | 0 | 0% | 32 | 2012 | Handcount | 32 | 2018 | Handcount | 0 | 32 | Handcount |
| SC | DILLON COUNTY | 0 | 0% | 20 | 2012 | Handcount | 20 | 2018 | Handcount | 0 | 20 | Handcount |
| SC | DORCHESTER COUNTY | -3 | -8% | 40 | 2012 | Handcount | 37 | 2018 | Handcount | -3 | 40 | Handcount |
| SC | EDGEFIELD COUNTY | 1 | 10% | 10 | 2012 | Handcount | 11 | 2018 | Handcount | 0 | 11 | Handcount |
| SC | FAIRFIELD COUNTY | 0 | 0% | 20 | 2012 | Handcount | 20 | 2018 | Handcount | 0 | 20 | Handcount |
| SC | FLORENCE COUNTY | -2 | -3% | 61 | 2012 | Handcount | 59 | 2018 | Handcount | -1 | 60 | Handcount |
| SC | GEORGETOWN COUNTY | 1 | 3% | 31 | 2012 | Handcount | 32 | 2018 | Handcount | 0 | 32 | Handcount |
| SC | GREENVILLE COUNTY | 0 | 0% | 150 | 2012 | Handcount | 150 | 2018 | Handcount | 0 | 150 | Handcount |
| SC | GREENWOOD COUNTY | 5 | 11% | 45 | 2012 | Handcount | 50 | 2018 | Handcount | 1 | 49 | Handcount |
| SC | HAMPTON COUNTY | 0 | 0% | 15 | 2012 | Handcount | 15 | 2018 | Handcount | 0 | 15 | Handcount |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|------------------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| SC | HORRY COUNTY | 5 | 4% | 117 | 2012 | Handcount | 122 | 2018 | Handcount | 4 | 118 | Handcount |
| SC | JASPER COUNTY | 1 | 8% | 13 | 2012 | Handcount | 14 | 2018 | Handcount | 0 | 14 | Handcount |
| SC | KERSHAW COUNTY | -1 | -3% | 34 | 2012 | Handcount | 33 | 2018 | Handcount | 1 | 32 | Handcount |
| SC | LANCASTER COUNTY | 7 | 24% | 29 | 2012 | Handcount | 36 | 2018 | Handcount | 7 | 29 | Handcount |
| SC | LAURENS COUNTY | 0 | 0% | 34 | 2012 | Handcount | 34 | 2018 | Handcount | 0 | 34 | Handcount |
| SC | LEE COUNTY | 0 | 0% | 22 | 2012 | Handcount | 22 | 2018 | Handcount | 0 | 22 | Handcount |
| SC | LEXINGTON COUNTY | 3 | 3% | 91 | 2012 | Handcount | 94 | 2018 | Handcount | -1 | 95 | Handcount |
| SC | MARION COUNTY | 0 | 0% | 17 | 2012 | Handcount | 17 | 2018 | Handcount | 0 | 17 | Handcount |
| SC | MARLBORO COUNTY | 0 | 0% | 15 | 2012 | Handcount | 15 | 2018 | Handcount | 0 | 15 | Handcount |
| SC | MCCORMICK COUNTY | 1 | 10% | 10 | 2012 | Handcount | 11 | 2018 | Handcount | 0 | 11 | Handcount |
| SC | NEWBERRY COUNTY | 0 | 0% | 29 | 2012 | Handcount | 29 | 2018 | Handcount | 0 | 29 | Handcount |
| SC | OCONEE COUNTY | 0 | 0% | 26 | 2012 | Handcount | 26 | 2018 | Handcount | 0 | 26 | Handcount |
| SC | ORANGEBURG COUNTY | 0 | 0% | 45 | 2012 | Handcount | 45 | 2018 | Handcount | 0 | 45 | Handcount |
| SC | PICKENS COUNTY | 0 | 0% | 55 | 2012 | Handcount | 55 | 2018 | Handcount | 0 | 55 | Handcount |
| SC | RICHLAND COUNTY | 20 | 16% | 122 | 2012 | Handcount | 142 | 2018 | Handcount | 0 | 142 | Handcount |
| SC | SALUDA COUNTY | 0 | 0% | 18 | 2012 | Handcount | 18 | 2018 | Handcount | 0 | 18 | Handcount |
| SC | SPARTANBURG COUNTY | 0 | 0% | 97 | 2012 | Handcount | 97 | 2018 | Handcount | 1 | 96 | Handcount |
| SC | SUMTER COUNTY | 0 | 0% | 46 | 2012 | Handcount | 46 | 2018 | Handcount | 0 | 46 | Handcount |
| SC | UNION COUNTY | 0 | 0% | 23 | 2012 | Handcount | 23 | 2018 | Handcount | 0 | 23 | Handcount |
| SC | WILLIAMSBURG COUNTY | 0 | 0% | 28 | 2012 | Handcount | 28 | 2018 | Handcount | 0 | 28 | Handcount |
| SC | YORK COUNTY | 3 | 3% | 86 | 2012 | Handcount | 89 | 2018 | Handcount | 0 | 89 | Handcount |
| SD | SHANNON/OTLALA LAKOTA COUNTY | -1 | -11% | 9 | 2012 | EAVS | 8 | 2018 | Handcount | -1 | 9 | EAVS |
| SD | TODD COUNTY | 0 | 0% | 8 | 2012 | EAVS | 8 | 2018 | Handcount | -1 | 9 | EAVS |
| TX | ANDERSON COUNTY | 0 | 0% | 22 | 2012 | EAVS | 22 | 2018 | Handcount | 0 | 22 | EAVS |
| TX | ANDREWS COUNTY | 0 | 0% | 1 | 2012 | EAVS | 1 | 2018 | EAVS | -1 | 2 | EAVS |
| TX | ANGELINA COUNTY | -4 | -13% | 31 | 2012 | EAVS | 27 | 2018 | Handcount | -3 | 30 | EAVS |
| TX | ARANSAS COUNTY | -3 | -50% | 6 | 2012 | EAVS | 3 | 2018 | Handcount | -3 | 6 | EAVS |
| TX | ARCHER COUNTY | -3 | -27% | 11 | 2012 | EAVS | 8 | 2018 | Handcount | -3 | 11 | EAVS |
| TX | ARMSTRONG COUNTY | -3 | -50% | 6 | 2012 | EAVS | 3 | 2018 | Handcount | -3 | 6 | EAVS |
| TX | ATASCOSA COUNTY | 0 | 0% | 23 | 2012 | EAVS | 23 | 2018 | Handcount | 0 | 23 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-----------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| TX | AUSTIN COUNTY | -2 | -11% | 18 | 2012 | EAVS | 16 | 2018 | Handcount | N/A | N/A | N/A |
| TX | BAILEY COUNTY | 0 | 0% | 1 | 2012 | EAVS | 1 | 2018 | EAVS | -1 | 2 | EAVS |
| TX | BANDERA COUNTY | 0 | 0% | 10 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| TX | BASTROP COUNTY | 1 | 5% | 20 | 2012 | EAVS | 21 | 2016 | Handcount | 1 | 20 | EAVS |
| TX | BAYLOR COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | EAVS | N/A | N/A | N/A |
| TX | BEE COUNTY | -7 | -41% | 17 | 2014 | EAVS | 10 | 2018 | Handcount | -7 | 17 | EAVS |
| TX | BELL COUNTY | -1 | -2% | 47 | 2012 | EAVS | 46 | 2018 | Handcount | 0 | 46 | EAVS |
| TX | BEXAR COUNTY | 0 | 0% | 302 | 2012 | EAVS | 302 | 2018 | Handcount | -4 | 306 | EAVS |
| TX | BLANCO COUNTY | 0 | 0% | 6 | 2012 | EAVS | 6 | 2016 | Handcount | 2 | 4 | EAVS |
| TX | BORDEN COUNTY | -1 | -14% | 7 | 2012 | EAVS | 6 | 2018 | Handcount | -2 | 8 | EAVS |
| TX | BOSQUE COUNTY | -5 | -36% | 14 | 2012 | EAVS | 9 | 2018 | Handcount | -2 | 11 | EAVS |
| TX | BOWIE COUNTY | -3 | -9% | 35 | 2012 | EAVS | 32 | 2018 | Handcount | -3 | 35 | EAVS |
| TX | BRAZORIA COUNTY | -37 | -59% | 63 | 2012 | EAVS | 26 | 2018 | Handcount | -38 | 64 | EAVS |
| TX | BRAZOS COUNTY | -11 | -31% | 36 | 2012 | EAVS | 25 | 2018 | Handcount | -11 | 36 | EAVS |
| TX | BREWSTER COUNTY | -1 | -13% | 8 | 2012 | EAVS | 7 | 2018 | Handcount | -2 | 9 | EAVS |
| TX | BRISCOE COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | Handcount | 0 | 5 | EAVS |
| TX | BROOKS COUNTY | -3 | -33% | 9 | 2014 | EAVS | 6 | 2018 | Handcount | -3 | 9 | EAVS |
| TX | BROWN COUNTY | -1 | -6% | 16 | 2012 | EAVS | 15 | 2018 | Handcount | -1 | 16 | EAVS |
| TX | BURLESON COUNTY | -1 | -7% | 14 | 2012 | EAVS | 13 | 2018 | Handcount | -1 | 14 | EAVS |
| TX | BURNET COUNTY | 0 | 0% | 20 | 2012 | EAVS | 20 | 2018 | Handcount | 0 | 20 | EAVS |
| TX | CALDWELL COUNTY | -13 | -52% | 25 | 2012 | EAVS | 12 | 2018 | Handcount | -5 | 17 | EAVS |
| TX | CALHOUN COUNTY | -7 | -30% | 23 | 2012 | EAVS | 16 | 2018 | Handcount | -8 | 24 | EAVS |
| TX | CALLAHAN COUNTY | -3 | -43% | 7 | 2012 | EAVS | 4 | 2018 | Handcount | -2 | 6 | EAVS |
| TX | CAMERON COUNTY | -7 | -8% | 83 | 2012 | EAVS | 76 | 2018 | Handcount | -1 | 77 | EAVS |
| TX | CAMP COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | CARSON COUNTY | 0 | 0% | 8 | 2014 | EAVS | 8 | 2016 | Handcount | 0 | 8 | EAVS |
| TX | CASS COUNTY | 0 | 0% | 18 | 2012 | EAVS | 18 | 2018 | Handcount | 0 | 18 | EAVS |
| TX | CASTRO COUNTY | 0 | 0% | 8 | 2012 | EAVS | 8 | 2018 | EAVS | 0 | 8 | N/A |
| TX | CHAMBERS COUNTY | 0 | 0% | 14 | 2012 | EAVS | 14 | 2018 | Handcount | 1 | 13 | EAVS |
| TX | CHEROKEE COUNTY | -2 | -8% | 25 | 2012 | EAVS | 23 | 2018 | Handcount | -1 | 24 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|----------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| TX | CHILDRESS COUNTY | -1 | -25% | 4 | 2012 | EAVS | 3 | 2018 | EAVS | -1 | 4 | EAVS |
| TX | CLAY COUNTY | 0 | 0% | 16 | 2012 | EAVS | 16 | 2016 | Handcount | 0 | 16 | EAVS |
| TX | COCHRAN COUNTY | -2 | -40% | 5 | 2012 | EAVS | 3 | 2018 | Handcount | -3 | 6 | EAVS |
| TX | COKE COUNTY | -2 | -50% | 4 | 2012 | EAVS | 2 | 2018 | Handcount | -2 | 4 | EAVS |
| TX | COLEMAN COUNTY | -1 | -20% | 5 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | COLLIN COUNTY | 2 | 3% | 67 | 2012 | EAVS | 69 | 2018 | Handcount | 2 | 67 | EAVS |
| TX | COLLINGSWORTH COUNTY | 1 | 14% | 7 | 2012 | EAVS | 8 | 2016 | EAVS | 0 | 8 | EAVS |
| TX | COLORADO COUNTY | -1 | -8% | 12 | 2012 | EAVS | 11 | 2018 | Handcount | -2 | 13 | EAVS |
| TX | COMAL COUNTY | 2 | 9% | 22 | 2012 | EAVS | 24 | 2018 | Handcount | 1 | 23 | EAVS |
| TX | COMANCHE COUNTY | -3 | -21% | 14 | 2012 | EAVS | 11 | 2018 | Handcount | -2 | 13 | EAVS |
| TX | CONCHO COUNTY | 0 | 0% | 8 | 2012 | EAVS | 8 | 2018 | Handcount | 0 | 8 | EAVS |
| TX | COOKE COUNTY | 0 | 0% | 16 | 2012 | EAVS | 16 | 2018 | Handcount | 16 | 0 | EAVS |
| TX | CORYELL COUNTY | -7 | -47% | 15 | 2012 | EAVS | 8 | 2018 | Handcount | -2 | 10 | EAVS |
| TX | COTTLE COUNTY | 2 | 100% | 2 | 2014 | EAVS | 4 | 2018 | EAVS | 2 | 2 | EAVS |
| TX | CRANE COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | CROCKETT COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | CULBERSON COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | Handcount | -1 | 6 | EAVS |
| TX | DALLAM COUNTY | 0 | 0% | 2 | 2014 | EAVS | 2 | 2018 | Handcount | 0 | 2 | EAVS |
| TX | DALLAS COUNTY | -74 | -15% | 485 | 2012 | EAVS | 411 | 2018 | Handcount | -78 | 489 | EAVS |
| TX | DAWSON COUNTY | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| TX | DEAF SMITH COUNTY | 2 | 50% | 4 | 2012 | EAVS | 6 | 2018 | Handcount | 2 | 4 | EAVS |
| TX | DENTON COUNTY | -3 | -3% | 97 | 2012 | EAVS | 94 | 2018 | EAVS | -9 | 103 | EAVS |
| TX | DEWITT COUNTY | -1 | -13% | 8 | 2012 | EAVS | 7 | 2018 | Handcount | -2 | 9 | EAVS |
| TX | DICKENS COUNTY | 0 | 0% | 6 | 2012 | EAVS | 6 | 2018 | Handcount | N/A | N/A | N/A |
| TX | DIMMIT COUNTY | 0 | 0% | 7 | 2012 | EAVS | 7 | 2018 | EAVS | N/A | N/A | EAVS |
| TX | DONLEY COUNTY | 0 | 0% | 6 | 2012 | EAVS | 6 | 2018 | Handcount | -1 | 7 | EAVS |
| TX | DUVAL COUNTY | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | EAVS | 0 | 9 | EAVS |
| TX | EASTLAND COUNTY | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| TX | ECTOR COUNTY | -3 | -11% | 28 | 2012 | EAVS | 25 | 2018 | Handcount | -11 | 36 | EAVS |
| TX | EDWARDS COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | Handcount | 0 | 5 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| TX | EL PASO COUNTY | -6 | -4% | 150 | 2014 | EAVS | 144 | 2018 | Handcount | -6 | 150 | EAVS |
| TX | ELLIS COUNTY | -2 | -5% | 39 | 2012 | EAVS | 37 | 2016 | Handcount | -4 | 41 | EAVS |
| TX | ERATH COUNTY | -1 | -9% | 11 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| TX | FALLS COUNTY | 0 | 0% | 13 | 2012 | EAVS | 13 | 2018 | Handcount | N/A | N/A | N/A |
| TX | FANNIN COUNTY | 0 | 0% | 16 | 2012 | EAVS | 16 | 2018 | Handcount | -1 | 17 | EAVS |
| TX | FAYETTE COUNTY | 0 | 0% | 26 | 2012 | EAVS | 26 | 2018 | Handcount | 0 | 26 | EAVS |
| TX | FISHER COUNTY | -6 | -60% | 10 | 2012 | EAVS | 4 | 2018 | Handcount | -6 | 10 | EAVS |
| TX | FLOYD COUNTY | 0 | 0% | 2 | 2012 | EAVS | 2 | 2018 | Handcount | 0 | 2 | EAVS |
| TX | FOARD COUNTY | 0 | 0% | 2 | 2012 | EAVS | 2 | 2018 | EAVS | 0 | 2 | EAVS |
| TX | FORT BEND COUNTY | -18 | -18% | 101 | 2014 | EAVS | 83 | 2016 | Handcount | -18 | 101 | EAVS |
| TX | FRANKLIN COUNTY | 0 | 0% | 8 | 2012 | EAVS | 8 | 2018 | Handcount | 0 | 8 | EAVS |
| TX | FREESTONE COUNTY | 0 | 0% | 15 | 2012 | EAVS | 15 | 2018 | Handcount | 0 | 15 | EAVS |
| TX | FRIO COUNTY | -1 | -10% | 10 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| TX | GAINES COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | GALVESTON COUNTY | -10 | -22% | 45 | 2012 | EAVS | 35 | 2018 | Handcount | 1 | 34 | EAVS |
| TX | GARZA COUNTY | 0 | 0% | 6 | 2012 | EAVS | 6 | 2018 | Handcount | -1 | 7 | EAVS |
| TX | GILLESPIE COUNTY | 0 | 0% | 13 | 2012 | EAVS | 13 | 2018 | Handcount | 0 | 13 | EAVS |
| TX | GLASSCOCK COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | GOLIAD COUNTY | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| TX | GONZALES COUNTY | 0 | 0% | 14 | 2012 | EAVS | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| TX | GRAY COUNTY | 0 | 0% | 7 | 2012 | EAVS | 7 | 2018 | Handcount | 0 | 7 | EAVS |
| TX | GRAYSON COUNTY | -13 | -36% | 36 | 2012 | EAVS | 23 | 2016 | Handcount | 0 | 23 | EAVS |
| TX | GREGG COUNTY | -3 | -14% | 21 | 2012 | EAVS | 18 | 2018 | Handcount | -3 | 21 | EAVS |
| TX | GRIMES COUNTY | 1 | 7% | 14 | 2012 | EAVS | 15 | 2018 | Handcount | 15 | 0 | EAVS |
| TX | GUADALUPE COUNTY | -1 | -3% | 35 | 2012 | EAVS | 34 | 2018 | Handcount | -1 | 35 | EAVS |
| TX | HALE COUNTY | 0 | 0% | 15 | 2012 | EAVS | 15 | 2018 | EAVS | 0 | 15 | N/A |
| TX | HALL COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | EAVS | -1 | 5 | EAVS |
| TX | HAMILTON COUNTY | -2 | -18% | 11 | 2012 | EAVS | 9 | 2018 | Handcount | -2 | 11 | EAVS |
| TX | HANSFORD COUNTY | -1 | -13% | 8 | 2012 | EAVS | 7 | 2018 | EAVS | -1 | 8 | EAVS |
| TX | HARDEMAN COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | EAVS | 0 | 4 | EAVS |

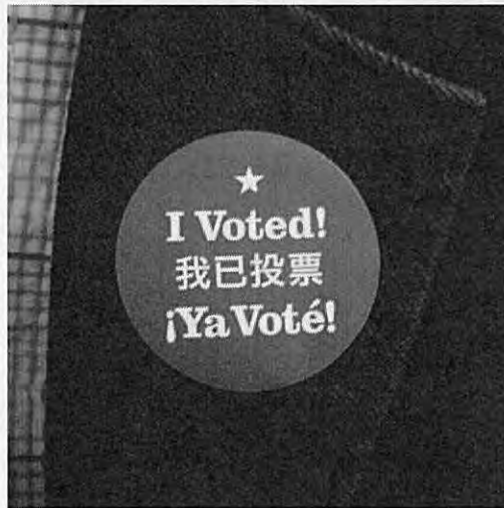
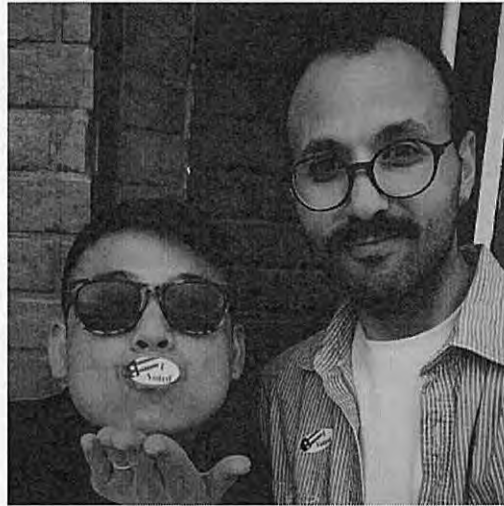
| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|-------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| TX | HARDIN COUNTY | 0 | 0% | 19 | 2012 | EAVS | 19 | 2018 | Handcount | 19 | 0 | EAVS |
| TX | HARRIS COUNTY | -52 | -7% | 776 | 2012 | EAVS | 724 | 2018 | Handcount | -46 | 770 | EAVS |
| TX | HARRISON COUNTY | 0 | 0% | 26 | 2012 | EAVS | 26 | 2018 | Handcount | 0 | 26 | EAVS |
| TX | HARTLEY COUNTY | 0 | 0% | 3 | 2012 | EAVS | 3 | 2018 | Handcount | 0 | 3 | EAVS |
| TX | HASKELL COUNTY | 0 | 0% | 10 | 2014 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| TX | HAYS COUNTY | 0 | 0% | 37 | 2012 | EAVS | 37 | 2018 | Handcount | 1 | 36 | EAVS |
| TX | HEMPHILL COUNTY | -1 | -11% | 9 | 2014 | EAVS | 8 | 2018 | EAVS | -1 | 9 | EAVS |
| TX | HENDERSON COUNTY | 0 | 0% | 26 | 2012 | EAVS | 26 | 2018 | Handcount | 0 | 26 | EAVS |
| TX | HIDALGO COUNTY | 0 | 0% | 74 | 2012 | EAVS | 74 | 2018 | Handcount | -1 | 75 | EAVS |
| TX | HILL COUNTY | 0 | 0% | 22 | 2012 | EAVS | 22 | 2018 | Handcount | 0 | 22 | EAVS |
| TX | HOCKLEY COUNTY | 1 | 7% | 14 | 2012 | EAVS | 15 | 2018 | Handcount | 1 | 14 | EAVS |
| TX | HOOD COUNTY | -5 | -33% | 15 | 2014 | EAVS | 10 | 2018 | Handcount | -5 | 15 | EAVS |
| TX | HOPKINS COUNTY | -9 | -43% | 21 | 2012 | EAVS | 12 | 2018 | Handcount | -9 | 21 | EAVS |
| TX | HOUSTON COUNTY | 1 | 5% | 21 | 2012 | EAVS | 22 | 2018 | Handcount | 1 | 21 | EAVS |
| TX | HOWARD COUNTY | -1 | -17% | 6 | 2012 | EAVS | 5 | 2018 | Handcount | -1 | 6 | EAVS |
| TX | HUDSPETH COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | EAVS | 0 | 5 | EAVS |
| TX | HUNT COUNTY | -1 | -3% | 34 | 2012 | EAVS | 33 | 2018 | Handcount | -1 | 34 | EAVS |
| TX | HUTCHINSON COUNTY | 0 | 0% | 8 | 2012 | EAVS | 8 | 2018 | Handcount | 0 | 8 | EAVS |
| TX | IRION COUNTY | -1 | -50% | 2 | 2012 | EAVS | 1 | 2018 | Handcount | -1 | 2 | EAVS |
| TX | JACK COUNTY | -2 | -33% | 6 | 2012 | EAVS | 4 | 2018 | Handcount | -4 | 8 | EAVS |
| TX | JACKSON COUNTY | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | -1 | 10 | EAVS |
| TX | JASPER COUNTY | 1 | 5% | 20 | 2012 | EAVS | 21 | 2016 | Handcount | 1 | 20 | EAVS |
| TX | JEFF DAVIS COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | Handcount | -1 | 6 | EAVS |
| TX | JEFFERSON COUNTY | -18 | -32% | 57 | 2012 | EAVS | 39 | 2018 | Handcount | -1 | 40 | EAVS |
| TX | JIM HOGG COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2016 | Handcount | -1 | 5 | EAVS |
| TX | JIM WELLS COUNTY | 0 | 0% | 21 | 2012 | EAVS | 21 | 2018 | EAVS | 0 | 21 | EAVS |
| TX | JOHNSON COUNTY | -3 | -10% | 31 | 2012 | EAVS | 28 | 2018 | Handcount | -1 | 29 | EAVS |
| TX | JONES COUNTY | -1 | -9% | 11 | 2012 | EAVS | 10 | 2018 | Handcount | -1 | 11 | EAVS |
| TX | KARNES COUNTY | 2 | 15% | 13 | 2014 | EAVS | 15 | 2018 | Handcount | 2 | 13 | EAVS |
| TX | KAUFMAN COUNTY | 0 | 0% | 30 | 2012 | EAVS | 30 | 2018 | Handcount | 0 | 30 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| TX | KENDALL COUNTY | -7 | -39% | 18 | 2012 | EAVS | 11 | 2018 | Handcount | -5 | 16 | EAVS |
| TX | KENEDY COUNTY | 0 | 0% | 6 | 2012 | EAVS | 6 | 2016 | Handcount | 0 | 6 | EAVS |
| TX | KENT COUNTY | -1 | -17% | 6 | 2012 | EAVS | 5 | 2018 | Handcount | -1 | 6 | EAVS |
| TX | KERR COUNTY | 0 | 0% | 20 | 2012 | EAVS | 20 | 2016 | Handcount | 0 | 20 | EAVS |
| TX | KIMBLE COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | EAVS | 0 | 4 | EAVS |
| TX | KING COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | EAVS | 0 | 4 | EAVS |
| TX | KINNEY COUNTY | 0 | 0% | 4 | 2014 | EAVS | 4 | 2016 | Handcount | 0 | 4 | EAVS |
| TX | KLEBERG COUNTY | 5 | 42% | 12 | 2012 | EAVS | 17 | 2018 | Handcount | -1 | 18 | EAVS |
| TX | KNOX COUNTY | -3 | -50% | 6 | 2012 | EAVS | 3 | 2018 | Handcount | -3 | 6 | EAVS |
| TX | LA SALLE COUNTY | 2 | 50% | 4 | 2012 | EAVS | 6 | 2018 | Handcount | 0 | 6 | EAVS |
| TX | LAMAR COUNTY | -1 | -3% | 33 | 2012 | EAVS | 32 | 2018 | Handcount | 0 | 32 | EAVS |
| TX | LAMB COUNTY | -3 | -33% | 9 | 2012 | EAVS | 6 | 2018 | Handcount | -6 | 12 | EAVS |
| TX | LAMPASAS COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | Handcount | 0 | 5 | EAVS |
| TX | LAVACA COUNTY | 0 | 0% | 19 | 2012 | EAVS | 19 | 2018 | Handcount | 0 | 19 | EAVS |
| TX | LEE COUNTY | -7 | -47% | 15 | 2012 | EAVS | 8 | 2018 | Handcount | -7 | 15 | EAVS |
| TX | LEON COUNTY | 0 | 0% | 14 | 2012 | EAVS | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| TX | LIBERTY COUNTY | 0 | 0% | 30 | 2012 | EAVS | 30 | 2018 | Handcount | 0 | 30 | EAVS |
| TX | LIMESTONE COUNTY | 0 | 0% | 21 | 2012 | EAVS | 21 | 2018 | Handcount | 0 | 21 | EAVS |
| TX | LIPSCOMB COUNTY | 0 | 0% | 4 | 2014 | EAVS | 4 | 2018 | EAVS | 0 | 4 | EAVS |
| TX | LIVE OAK COUNTY | -1 | -7% | 14 | 2012 | EAVS | 13 | 2018 | Handcount | 0 | 13 | EAVS |
| TX | LLANO COUNTY | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| TX | LOVING COUNTY | -3 | -75% | 4 | 2012 | EAVS | 1 | 2018 | Handcount | 0 | 1 | EAVS |
| TX | LUBBOCK COUNTY | 0 | 0% | 37 | 2012 | EAVS | 37 | 2018 | Handcount | 1 | 36 | EAVS |
| TX | LYNN COUNTY | 0 | 0% | 10 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| TX | MADISON COUNTY | 1 | 25% | 4 | 2012 | EAVS | 5 | 2018 | Handcount | -1 | 6 | EAVS |
| TX | MARION COUNTY | 0 | 0% | 10 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| TX | MARTIN COUNTY | -1 | -33% | 3 | 2012 | EAVS | 2 | 2016 | EAVS | -5 | 7 | EAVS |
| TX | MASON COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | EAVS | N/A | N/A | N/A |
| TX | MATAGORDA COUNTY | 0 | 0% | 18 | 2012 | EAVS | 18 | 2016 | Handcount | 0 | 18 | EAVS |
| TX | MAVERICK COUNTY | -1 | -7% | 14 | 2012 | EAVS | 13 | 2018 | Handcount | -1 | 14 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|--------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| TX | MCCULLOCH COUNTY | 1 | 14% | 7 | 2012 | EAVS | 8 | 2018 | Handcount | -1 | 9 | EAVS |
| TX | MCLENNAN COUNTY | -30 | -51% | 59 | 2012 | EAVS | 29 | 2018 | Handcount | -11 | 40 | EAVS |
| TX | MCMULLEN COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | MEDINA COUNTY | -6 | -46% | 13 | 2012 | EAVS | 7 | 2018 | Handcount | N/A | N/A | N/A |
| TX | MENARD COUNTY | 0 | 0% | 3 | 2012 | EAVS | 3 | 2018 | EAVS | 0 | 3 | EAVS |
| TX | MIDLAND COUNTY | 0 | 0% | 20 | 2012 | EAVS | 20 | 2018 | Handcount | 0 | 20 | EAVS |
| TX | MILAM COUNTY | -3 | -27% | 11 | 2012 | EAVS | 8 | 2018 | Handcount | -3 | 11 | EAVS |
| TX | MILLS COUNTY | 0 | 0% | 7 | 2012 | EAVS | 7 | 2018 | Handcount | 0 | 7 | EAVS |
| TX | MITCHELL COUNTY | 0 | 0% | 6 | 2012 | EAVS | 6 | 2018 | Handcount | 0 | 6 | EAVS |
| TX | MONTAGUE COUNTY | -6 | -38% | 16 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| TX | MONTGOMERY COUNTY | 8 | 9% | 86 | 2012 | EAVS | 94 | 2018 | Handcount | 5 | 89 | EAVS |
| TX | MOORE COUNTY | 0 | 0% | 7 | 2016 | Handcount | 7 | 2018 | Handcount | N/A | N/A | N/A |
| TX | MORRIS COUNTY | -2 | -25% | 8 | 2012 | EAVS | 6 | 2018 | Handcount | -2 | 8 | EAVS |
| TX | NACOGDOCHES COUNTY | 0 | 0% | 17 | 2012 | EAVS | 17 | 2018 | Handcount | 0 | 17 | EAVS |
| TX | NAVARRO COUNTY | -10 | -33% | 30 | 2012 | EAVS | 20 | 2018 | Handcount | -2 | 22 | EAVS |
| TX | NEWTON COUNTY | -6 | -27% | 22 | 2012 | EAVS | 16 | 2018 | Handcount | -6 | 22 | EAVS |
| TX | NOLAN COUNTY | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| TX | NUECES COUNTY | -37 | -31% | 121 | 2012 | EAVS | 84 | 2018 | Handcount | -30 | 114 | EAVS |
| TX | OCHILTREE COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | -1 | 5 | EAVS |
| TX | OLDHAM COUNTY | -3 | -43% | 7 | 2012 | EAVS | 4 | 2018 | Handcount | -3 | 7 | EAVS |
| TX | ORANGE COUNTY | -1 | -3% | 34 | 2012 | EAVS | 33 | 2018 | Handcount | -1 | 34 | EAVS |
| TX | PALO PINTO COUNTY | -4 | -24% | 17 | 2012 | EAVS | 13 | 2018 | Handcount | -4 | 17 | EAVS |
| TX | PANOLA COUNTY | -1 | -5% | 20 | 2012 | EAVS | 19 | 2018 | Handcount | -1 | 20 | EAVS |
| TX | PARKER COUNTY | -3 | -7% | 44 | 2012 | EAVS | 41 | 2018 | Handcount | -4 | 45 | EAVS |
| TX | PARMER COUNTY | 0 | 0% | 9 | 2016 | Handcount | 9 | 2018 | Handcount | 9 | 0 | EAVS |
| TX | PECOS COUNTY | 0 | 0% | 9 | 2012 | EAVS | 9 | 2018 | Handcount | 0 | 9 | EAVS |
| TX | POLK COUNTY | 0 | 0% | 21 | 2012 | EAVS | 21 | 2018 | Handcount | 0 | 21 | EAVS |
| TX | POTTER COUNTY | -8 | -33% | 24 | 2012 | EAVS | 16 | 2018 | Handcount | -8 | 24 | EAVS |
| TX | PRESIDIO COUNTY | 0 | 0% | 2 | 2012 | EAVS | 2 | 2018 | Handcount | -1 | 3 | EAVS |
| TX | RAINS COUNTY | 0 | 0% | 8 | 2012 | EAVS | 8 | 2018 | Handcount | -1 | 9 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|----------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| TX | RANDALL COUNTY | -9 | -41% | 22 | 2012 | EAVS | 13 | 2018 | Handcount | -1 | 14 | EAVS |
| TX | REAGAN COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | REAL COUNTY | 0 | 0% | 5 | 2014 | EAVS | 5 | 2018 | EAVS | 0 | 5 | EAVS |
| TX | RED RIVER COUNTY | 0 | 0% | 19 | 2014 | EAVS | 19 | 2018 | EAVS | 0 | 19 | EAVS |
| TX | REEVES COUNTY | -2 | -17% | 12 | 2014 | EAVS | 10 | 2018 | Handcount | -2 | 12 | EAVS |
| TX | REFUGIO COUNTY | 0 | 0% | 10 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| TX | ROBERTS COUNTY | 0 | 0% | 2 | 2012 | EAVS | 2 | 2018 | EAVS | 0 | 2 | EAVS |
| TX | ROBERTSON COUNTY | -1 | -7% | 14 | 2012 | EAVS | 13 | 2018 | Handcount | 0 | 13 | EAVS |
| TX | ROCKWALL COUNTY | 0 | 0% | 17 | 2012 | EAVS | 17 | 2018 | Handcount | -1 | 18 | EAVS |
| TX | RUNNELS COUNTY | 1 | 14% | 7 | 2012 | EAVS | 8 | 2018 | Handcount | 0 | 8 | EAVS |
| TX | RUSK COUNTY | -10 | -45% | 22 | 2012 | EAVS | 12 | 2018 | Handcount | -5 | 17 | EAVS |
| TX | SABINE COUNTY | 0 | 0% | 8 | 2012 | EAVS | 8 | 2018 | Handcount | 0 | 8 | EAVS |
| TX | SAN AUGUSTINE COUNTY | 0 | 0% | 11 | 2012 | EAVS | 11 | 2018 | Handcount | 0 | 11 | EAVS |
| TX | SAN JACINTO COUNTY | -1 | -9% | 11 | 2012 | EAVS | 10 | 2018 | Handcount | -1 | 11 | EAVS |
| TX | SAN PATRICIO COUNTY | -9 | -53% | 17 | 2012 | EAVS | 8 | 2018 | Handcount | -9 | 17 | EAVS |
| TX | SAN SABA COUNTY | -1 | -25% | 4 | 2012 | EAVS | 3 | 2018 | EAVS | 1 | 2 | EAVS |
| TX | SCHLEICHER COUNTY | -1 | -25% | 4 | 2012 | EAVS | 3 | 2018 | Handcount | -1 | 4 | EAVS |
| TX | SCURRY COUNTY | -1 | -9% | 11 | 2012 | EAVS | 10 | 2018 | Handcount | -1 | 11 | EAVS |
| TX | SHACKELFORD COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | Handcount | N/A | N/A | N/A |
| TX | SHELBY COUNTY | 0 | 0% | 14 | 2012 | EAVS | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| TX | SHERMAN COUNTY | 0 | 0% | 4 | 2014 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | SMITH COUNTY | -14 | -29% | 48 | 2012 | EAVS | 34 | 2018 | Handcount | -8 | 42 | EAVS |
| TX | SOMERVELL COUNTY | -4 | -80% | 5 | 2012 | EAVS | 1 | 2018 | Handcount | -3 | 4 | EAVS |
| TX | STARR COUNTY | -1 | -9% | 11 | 2016 | Handcount | 10 | 2018 | Handcount | N/A | N/A | N/A |
| TX | STEPHENS COUNTY | -1 | -17% | 6 | 2012 | EAVS | 5 | 2018 | Handcount | 0 | 5 | EAVS |
| TX | STERLING COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2018 | EAVS | 0 | 4 | EAVS |
| TX | STONEWALL COUNTY | -3 | -75% | 4 | 2012 | EAVS | 1 | 2018 | Handcount | -6 | 7 | EAVS |
| TX | SUTTON COUNTY | 0 | 0% | 4 | 2012 | EAVS | 4 | 2016 | Handcount | -1 | 5 | EAVS |
| TX | SWISHER COUNTY | -1 | -20% | 5 | 2012 | EAVS | 4 | 2018 | Handcount | 0 | 4 | EAVS |
| TX | TARRANT COUNTY | -27 | -7% | 365 | 2014 | EAVS | 338 | 2018 | Handcount | -27 | 365 | EAVS |

| State | County | # Changed | % Changed | Benchmark Election Count | Benchmark Election Year | Benchmark Election Source | Post-Shelby Election Count | Post-Shelby Election Year | Post-Shelby Election Source | Midterm to Midterm | 2014 Midterm Count | 2014 Midterm Source |
|-------|---------------------|--------------|--------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| TX | TAYLOR COUNTY | -14 | -41% | 34 | 2012 | EAVS | 20 | 2018 | Handcount | -3 | 23 | EAVS |
| TX | TERRELL COUNTY | -1 | -50% | 2 | 2012 | EAVS | 1 | 2018 | Handcount | -4 | 5 | EAVS |
| TX | TERRY COUNTY | -1 | -14% | 7 | 2012 | EAVS | 6 | 2018 | Handcount | -1 | 7 | EAVS |
| TX | THROCKMORTON COUNTY | -1 | -20% | 5 | 2012 | EAVS | 4 | 2018 | Handcount | -2 | 6 | EAVS |
| TX | TITUS COUNTY | 0 | 0% | 19 | 2012 | EAVS | 19 | 2018 | EAVS | 0 | 19 | EAVS |
| TX | TOM GREEN COUNTY | -7 | -27% | 26 | 2012 | EAVS | 19 | 2018 | Handcount | 1 | 18 | EAVS |
| TX | TRAVIS COUNTY | -67 | -32% | 210 | 2012 | EAVS | 143 | 2018 | Handcount | -43 | 186 | EAVS |
| TX | TRINITY COUNTY | 0 | 0% | 20 | 2012 | EAVS | 20 | 2018 | Handcount | 0 | 20 | EAVS |
| TX | TYLER COUNTY | 0 | 0% | 17 | 2012 | EAVS | 17 | 2018 | Handcount | 0 | 17 | EAVS |
| TX | UPSHUR COUNTY | 0 | 0% | 16 | 2012 | EAVS | 16 | 2018 | Handcount | 0 | 16 | EAVS |
| TX | UPTON COUNTY | 0 | 0% | 3 | 2012 | EAVS | 3 | 2018 | Handcount | 0 | 3 | EAVS |
| TX | UVALDE COUNTY | 0 | 0% | 14 | 2012 | EAVS | 14 | 2018 | Handcount | 0 | 14 | EAVS |
| TX | VAL VERDE COUNTY | -3 | -18% | 17 | 2012 | EAVS | 14 | 2018 | Handcount | 14 | 0 | EAVS |
| TX | VAN ZANDT COUNTY | 0 | 0% | 18 | 2012 | EAVS | 18 | 2018 | Handcount | 0 | 18 | EAVS |
| TX | VICTORIA COUNTY | 0 | 0% | 35 | 2012 | EAVS | 35 | 2016 | Handcount | 0 | 35 | EAVS |
| TX | WALKER COUNTY | 0 | 0% | 16 | 2012 | EAVS | 16 | 2018 | Handcount | 0 | 16 | EAVS |
| TX | WALLER COUNTY | 0 | 0% | 19 | 2012 | EAVS | 19 | 2018 | Handcount | 0 | 19 | EAVS |
| TX | WARD COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | Handcount | -4 | 9 | EAVS |
| TX | WASHINGTON COUNTY | 0 | 0% | 15 | 2012 | EAVS | 15 | 2018 | Handcount | 0 | 15 | EAVS |
| TX | WEBB COUNTY | 9 | 15% | 60 | 2012 | EAVS | 69 | 2018 | Handcount | 2 | 67 | EAVS |
| TX | WHARTON COUNTY | -4 | -33% | 12 | 2012 | EAVS | 8 | 2018 | Handcount | 0 | 8 | EAVS |
| TX | WHEELER COUNTY | 0 | 0% | 10 | 2012 | EAVS | 10 | 2018 | Handcount | 0 | 10 | EAVS |
| TX | WICHITA COUNTY | -8 | -24% | 34 | 2012 | EAVS | 26 | 2018 | Handcount | -5 | 31 | EAVS |
| TX | WILBARGER COUNTY | -2 | -33% | 6 | 2012 | EAVS | 4 | 2016 | Handcount | -3 | 7 | EAVS |
| TX | WILLACY COUNTY | -1 | -9% | 11 | 2012 | EAVS | 10 | 2018 | Handcount | -1 | 11 | EAVS |
| TX | WILLIAMSON COUNTY | -27 | -31% | 86 | 2012 | EAVS | 59 | 2018 | Handcount | -3 | 62 | EAVS |
| TX | WILSON COUNTY | 0 | 0% | 16 | 2012 | EAVS | 16 | 2018 | Handcount | 0 | 16 | EAVS |
| TX | WINKLER COUNTY | 0 | 0% | 5 | 2012 | EAVS | 5 | 2018 | Handcount | 0 | 5 | EAVS |
| TX | WISE COUNTY | 1 | 5% | 21 | 2012 | EAVS | 22 | 2016 | Handcount | 1 | 21 | EAVS |
| TX | WOOD COUNTY | 0 | 0% | 11 | 2012 | EAVS | 11 | 2018 | Handcount | -1 | 12 | EAVS |
| TX | YOAKUM COUNTY | 0 | 0% | 2 | 2012 | EAVS | 2 | 2018 | Handcount | 0 | 2 | EAVS |
| TX | YOUNG COUNTY | -4 | -44% | 9 | 2012 | EAVS | 5 | 2018 | Handcount | -4 | 9 | EAVS |
| TX | ZAPATA COUNTY | 0 | 0% | 7 | 2012 | EAVS | 7 | 2018 | Handcount | 0 | 7 | EAVS |
| TX | ZAVALA COUNTY | -2 | -33% | 6 | 2012 | EAVS | 4 | 2018 | EAVS | -3 | 7 | EAVS |





The Leadership
Conference
Education Fund

1620 L Street NW, Suite 1100
Washington, DC 20036



(202) 466-3434



votingrights@civilrights.org



[@civilrightsorg](https://twitter.com/civilrightsorg)

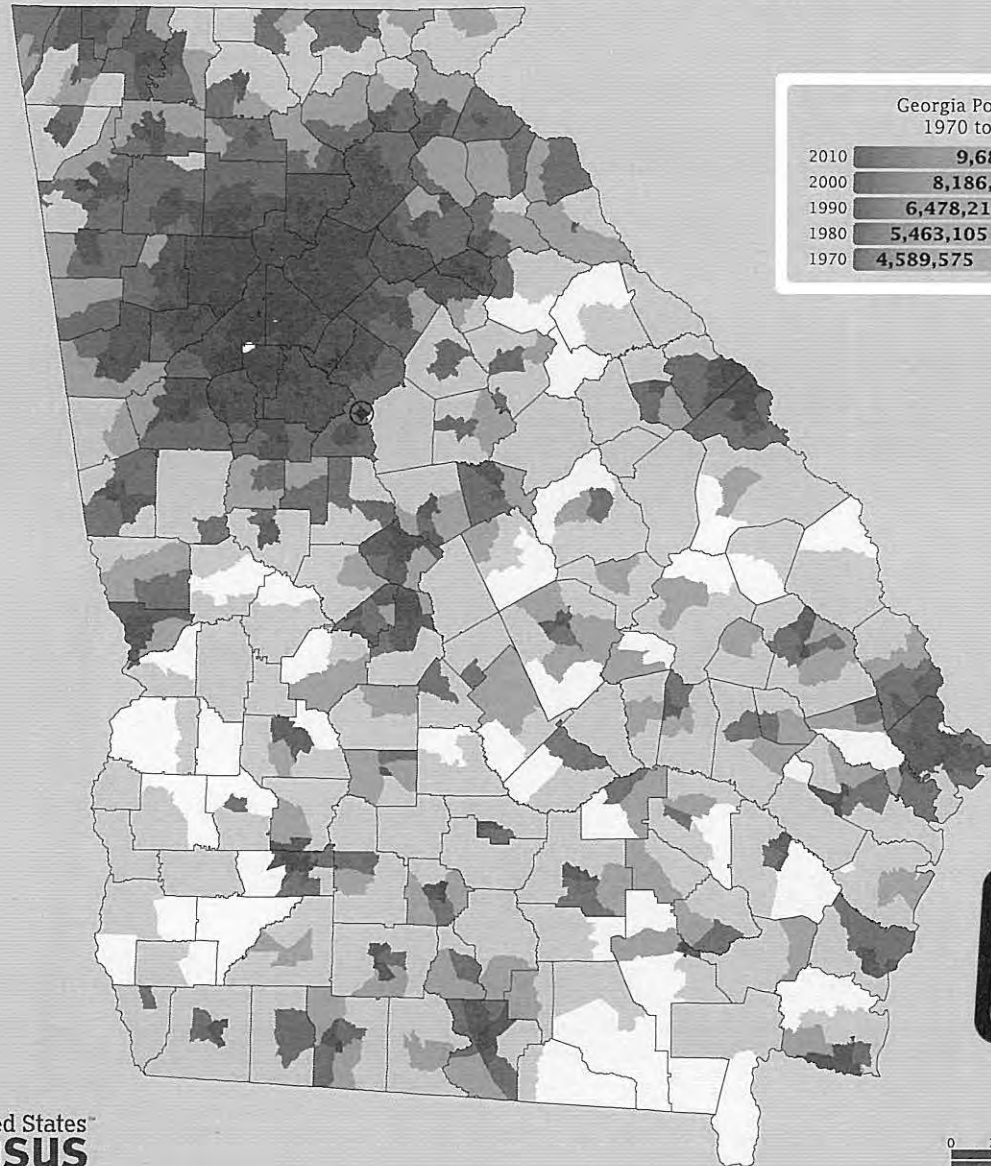


[@civilandhumanrights](https://www.facebook.com/civilandhumanrights)

DEFENDANTS' EX. 9

2010 Census: Georgia Profile

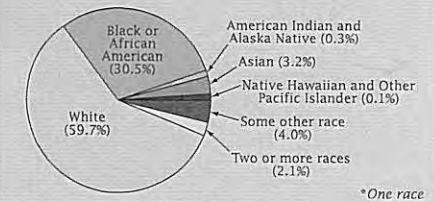
Population Density by Census Tract



Georgia Population 1970 to 2010

| | |
|------|-----------|
| 2010 | 9,687,653 |
| 2000 | 8,186,453 |
| 1990 | 6,478,216 |
| 1980 | 5,463,105 |
| 1970 | 4,589,575 |

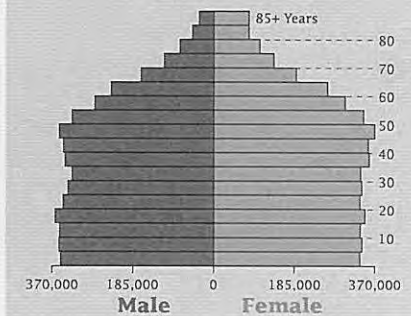
State Race* Breakdown



Hispanic or Latino (of any race)
makes up **8.8%** of the state population.

Population by Sex and Age

Total Population: 9,687,653



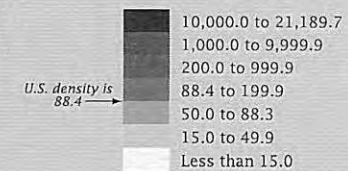
Housing Tenure

Total Occupied Housing Units:
3,585,584

65.7% Owner Occupied 34.3% Renter Occupied

Average Household Size of Owner-Occupied Units: 2.67 people
Average Household Size of Renter-Occupied Units: 2.56 people

People per Square Mile by Census Tract



U.S. density is 88.4

County Boundary

Georgia Mean Center of Population

United States
Census
Bureau

Georgia

BASIC INFORMATION

2010 Census Population: 9,687,653 (9th)
 Land Area: 57,513.5 square miles (21st)
 Density: 168.4 persons per square mile (18th)
 Capital: Atlanta
 Became a State: January 2, 1788 (4th)

Bordering States: Alabama, Florida, North Carolina, South Carolina, Tennessee
 Abbreviation: GA
 ANSI/FIPS Code: 13

HISTORY

The area of Georgia was part of the original territory of the United States. It was chartered as a colony in 1732. Georgia ratified the U.S. Constitution on January 2, 1788; it was the fourth of the original 13 states to join the Union. At that time, Georgia included territory that extended westward to the Mississippi River and now makes up most of Alabama and Mississippi. The territory west of the present state boundary was added to Mississippi Territory when Georgia ceded to the United States its claims to the territory in 1802. As part of this cession, Georgia obtained part of the South Carolina cession of 1787 from the federal government along its northern boundary. These changes left Georgia with generally the same boundary as the present state.

Census data for Georgia are available beginning with the 1790 census. No population was reported in 1790 for the portion of Georgia now within Alabama and Mississippi. The 1800 population shown for Georgia includes population in the territory that is now part of Alabama and Mississippi. For an explanation of the revision to the 1810 population of Georgia, see Richard L. Forstall, *Population of States and Counties of the United States: 1790-1990*, Washington, DC: U.S. Government Printing Office, 1996, page 40.

AMERICAN INDIAN AREAS

Georgia has one state recognized American Indian reservation.

METROPOLITAN AND MICROPOLITAN STATISTICAL AREAS AND RELATED STATISTICAL AREAS

Georgia has 15 metropolitan statistical areas, 24 micropolitan statistical areas, and 5 combined statistical areas.

COUNTIES

There are 159 counties in Georgia. Six counties are not considered to be functioning because each has consolidated its services with an incorporated place.

COUNTY SUBDIVISIONS

There are 586 county subdivisions in Georgia. They are all census county divisions (CCDs), which are delineated for statistical purposes, have no legal function, and are not governmental units.

PLACES

Georgia has 624 places; 535 incorporated places and 89 census designated places (CDPs). The incorporated places consist of 425 cities, 105 towns, 3 unified governments, and 2 balances of county representing the portion of the consolidated cities that are outside of other incorporated places.

| Geographic Entities | 2010 Census | Census 2000 |
|--|-------------|-------------|
| American Indian / Alaska Native / Native Hawaiian Area | 1 | 1 |
| Block Groups | 5,533 | 4,788 |
| Census Blocks | 291,086 | 214,576 |
| Census Tracts | 1,969 | 1,618 |
| Congressional Districts (108th-112th) | 13 | 13 |
| Consolidated Cities | 2 | 3 |
| Counties and Equivalents | 159 | 159 |
| County Subdivisions | 586 | 577 |
| Elementary School Districts | 1 | N/A |
| Places | 624 | 596 |
| Secondary School Districts | 2 | N/A |
| State Legislative Districts (Lower) | 180 | 180 |
| State Legislative Districts (Upper) | 56 | 56 |
| Unified School Districts | 182 | 183 |
| Voting Districts | 2,962 | 2,733 |

| Features | 2010 Census |
|------------------------------------|-------------|
| Address Range-Feature Names | 1,384,937 |
| Address Ranges | 1,214,196 |
| Area Landmarks | 4,990 |
| Areal Water | 101,538 |
| Edges | 2,178,379 |
| Feature Names | 1,895,803 |
| Linear Water | 193,453 |
| Point Landmarks | 27,057 |
| Primary and Secondary Roads | 14,452 |
| Roads | 522,405 |
| Topological Faces | 655,832 |
| Topological Faces-Area Hydrography | 161,123 |
| Topological Faces-Area Landmark | 9,133 |

DEFENDANTS' EX. 10

We are hiring thousands of people for the 2020 Census. Click to
learn more and apply.

FOR IMMEDIATE RELEASE: WEDNESDAY, NOVEMBER 16, 2016

NOVEMBER 16, 2016

RELEASE NUMBER CB16-189



NOV. 16, 2016 —The percentage of Americans moving over a one-year period fell to an all time low in the United States to 11.2 percent in 2016, according to tables released today by the U.S. Census Bureau.

“People in the United States are still moving, just not to the same extent as they did in the past,” David Ihrke said, a survey statistician in the Journey-to-Work and Migration Statistics Branch. “The decision to move can be personal and contextual. What causes one person to move might not be enough to convince another.”

Among those who moved, 42.2 percent said they moved for a housing-related reason, such as wanting a new or better home/apartment. In comparison, 27.4 percent said they moved for a family-related reason, 20.2 percent said they moved for an employment-related reason, and 10.2 percent said they moved for some other reason.

Among regions, the South saw the greatest number of people moving out (901,000), but also saw the largest inflow of people moving into the region (940,000). The inflows and outflows of the region are not statistically different from each other.

The highest mover rates by race were for the black or African-American alone population (13.8 percent) and the Asian alone population (13.4 percent). These two mover rates were not statistically different. The white alone population moved at a rate of 10.3 percent. The Hispanic or Latino population (12.6 percent) were more mobile than the non-Hispanic white population (9.8 percent).

The statistics released today come from *Geographical Mobility: 2015 to 2016*, a collection of national- and regional-level tables from the Current Population Survey Annual Social and Economic Supplement. The tables describe the

movement of people in the United States, including type of move, reason for moving and characteristics of those who moved during the past year. Distance moved is also available for people who moved to a different county or state. Also released today were updated historical tables and graphs on migration with some statistics extending as far back as 1948.

American Community Survey Migration Flows: 2015 State-to-State and Place of Birth by State of Residence and 2010-2014 County-to-County and Metro-to-Metro

Also available today are 2015 American Community Survey state-to-state and place of birth flows and 2010-2014 American Community Survey county-to-county and metro-to-metro flows statistics. The county-to-county and metro-to-metro migration flows tables, which use data collected between 2010 and 2014, show how many residents move (or flow) from one county or metro area to another over a one-year period.

Among the 2015 American Community Survey state-to-state and place of birth flows:

- New York had 69,289 migrants to Florida, and California had 65,546 migrants to Texas. The state flows are not statistically different from each other.
- Over 1.5 million people living in Florida were born in New York. This was the largest flow between state of birth and state of current residence followed by over 0.9 million people who were born in New York living in New Jersey.

Highlights from the migration flows from the 2010-2014 American Community Survey:

- Approximately 16.9 million people moved annually to a different county, and nearly another 1.9 million people moved to the United States from abroad.
- The two largest county migration flows were Los Angeles County to Orange County in California with 41,558 movers and Los Angeles County to San Bernardino County in California with 39,865 movers. The two largest county-to-county flows do not differ statistically from each other.
- Among metro areas, in California, the Los Angeles-Long Beach-Anaheim metro area had 87,565 movers go to the Riverside-San Bernardino-Ontario metro area.

In addition to new data tables, the Census Flows Mapper tool now includes statistics from the 2010-2014 American Community Survey to show demographic statistics on the mover's relationship to the householder, household type and housing tenure. In addition, the 2010-2014 migration flow statistics are available through the Census Application Program Interface (API).

-X-

301-763-3030

pio@census.gov

Related Information



Graphic: Embed, Download or Print

DEFENDANTS' EX. 11



QuickFacts

Rabun County, Georgia; Stephens County, Georgia

QuickFacts provides statistics for all states and counties, and for cities and towns with a *population of 5,000 or more*.

Table

| All Topics | Rabun County, Georgia | Stephens County, Georgia |
|--|--------------------------|-----------------------------|
| Population estimates, July 1, 2019, (V2019) | NA | NA |
| PEOPLE | | |
| Population | | |
| Population estimates, July 1, 2019, (V2019) | NA | NA |
| Population estimates, July 1, 2018, (V2018) | 16,867 | 26,035 |
| Population estimates base, April 1, 2010, (V2019) | NA | NA |
| Population estimates base, April 1, 2010, (V2018) | 16,276 | 26,173 |
| Population, percent change - April 1, 2010 (estimates base) to July 1, 2019, (V2019) | NA | NA |
| Population, percent change - April 1, 2010 (estimates base) to July 1, 2018, (V2018) | 3.6% | -0.5% |
| Population, Census, April 1, 2010 | 16,276 | 26,175 |
| Age and Sex | | |
| Persons under 5 years, percent | ▲ 4.3% | ▲ 6.1% |
| Persons under 18 years, percent | ▲ 16.9% | ▲ 22.2% |
| Persons 65 years and over, percent | ▲ 27.6% | ▲ 19.4% |
| Female persons, percent | ▲ 50.8% | ▲ 52.0% |
| Race and Hispanic Origin | | |
| White alone, percent | ▲ 94.9% | ▲ 85.0% |
| Black or African American alone, percent (a) | ▲ 1.6% | ▲ 11.0% |
| American Indian and Alaska Native alone, percent (a) | ▲ 0.6% | ▲ 0.5% |
| Asian alone, percent (a) | ▲ 1.1% | ▲ 0.9% |
| Native Hawaiian and Other Pacific Islander alone, percent (a) | ▲ 0.1% | ▲ 0.1% |
| Two or More Races, percent | ▲ 1.8% | ▲ 2.4% |
| Hispanic or Latino, percent (b) | ▲ 8.2% | ▲ 3.6% |
| White alone, not Hispanic or Latino, percent | ▲ 87.6% | ▲ 82.2% |
| Population Characteristics | | |
| Veterans, 2014-2018 | 1,430 | 1,730 |
| Foreign born persons, percent, 2014-2018 | 5.3% | 2.1% |
| Housing | | |
| Housing units, July 1, 2018, (V2018) | 12,680 | 12,617 |
| Owner-occupied housing unit rate, 2014-2018 | 74.8% | 69.8% |
| Median value of owner-occupied housing units, 2014-2018 | \$164,900 | \$94,300 |
| Median selected monthly owner costs -with a mortgage, 2014-2018 | \$1,247 | \$977 |
| Median selected monthly owner costs -without a mortgage, 2014-2018 | \$389 | \$357 |
| Median gross rent, 2014-2018 | \$678 | \$713 |
| Building permits, 2018 | 66 | 1 |
| Families & Living Arrangements | | |
| Households, 2014-2018 | 6,563 | 9,468 |
| Persons per household, 2014-2018 | 2.44 | 2.63 |
| Living in same house 1 year ago, percent of persons age 1 year+, 2014-2018 | 92.7% | 87.0% |
| Language other than English spoken at home, percent of persons age 5 years+, 2014-2018 | 9.3% | 4.0% |
| Computer and Internet Use | | |
| Households with a computer, percent, 2014-2018 | 78.4% | 81.8% |
| Households with a broadband Internet subscription, percent, 2014-2018 | 69.8% | 69.1% |
| Education | | |
| High school graduate or higher, percent of persons age 25 years+, 2014-2018 | 84.2% | 83.5% |
| Bachelor's degree or higher, percent of persons age 25 years+, 2014-2018 | 24.8% | 22.1% |
| Health | | |
| With a disability, under age 65 years, percent, 2014-2018 | 14.3% | 13.6% |
| Persons without health insurance, under age 65 years, percent | ▲ 21.3% | ▲ 15.8% |
| Economy | | |
| In civilian labor force, total, percent of population age 16 years+, 2014-2018 | 45.6% | 55.1% |
| In civilian labor force, female, percent of population age 16 years+, 2014-2018 | 42.6% | 50.1% |
| Total accommodation and food services sales, 2012 (\$1,000) (c) | 47,210 | 24,860 |
| Total health care and social assistance receipts/revenue, 2012 (\$1,000) (c) | 41,814 | 110,754 |
| Total manufacturers shipments, 2012 (\$1,000) (c) | D | 511,616 |



| | | |
|--|----------|----------|
| Total merchant wholesaler sales, 2012 (\$1,000) (c) | 468 | D |
| Total retail sales, 2012 (\$1,000) (c) | 247,664 | 262,500 |
| Total retail sales per capita, 2012 (c) | \$15,197 | \$10,139 |
| Transportation | | |
| Mean travel time to work (minutes), workers age 16 years+, 2014-2018 | 20.9 | 21.8 |
| Income & Poverty | | |
| Median household income (in 2018 dollars), 2014-2018 | \$40,902 | \$43,416 |
| Per capita income in past 12 months (in 2018 dollars), 2014-2018 | \$28,312 | \$21,839 |
| Persons in poverty, percent | ▲ 14.2% | ▲ 16.3% |

BUSINESSES

| | | |
|---|---------|---------|
| Businesses | | |
| Total employer establishments, 2017 | 479 | 549 |
| Total employment, 2017 | 4,671 | 7,921 |
| Total annual payroll, 2017 (\$1,000) | 137,051 | 270,948 |
| Total employment, percent change, 2016-2017 | 13.6% | -0.3% |
| Total nonemployer establishments, 2017 | 1,905 | 1,635 |
| All firms, 2012 | 1,645 | 2,245 |
| Men-owned firms, 2012 | 1,034 | 1,364 |
| Women-owned firms, 2012 | 496 | 603 |
| Minority-owned firms, 2012 | 109 | 259 |
| Nonminority-owned firms, 2012 | 1,485 | 1,864 |
| Veteran-owned firms, 2012 | 163 | 425 |
| Nonveteran-owned firms, 2012 | 1,400 | 1,621 |

GEOGRAPHY

| | | |
|----------------------------------|--------|--------|
| Geography | | |
| Population per square mile, 2010 | 44.0 | 146.1 |
| Land area in square miles, 2010 | 369.99 | 179.13 |
| FIPS Code | 13241 | 13257 |

About datasets used in this table

Value Notes

Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. Click the Quick Info icon to the left of each row in TABLE view to learn about sampling error.

The vintage year (e.g., V2019) refers to the final year of the series (2010 thru 2019). Different vintage years of estimates are not comparable.

Fact Notes

- (a) Includes persons reporting only one race
- (b) Hispanics may be of any race, so also are included in applicable race categories
- (c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

Value Flags

- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper interval of an open ended distribution.
- D Suppressed to avoid disclosure of confidential information
- F Fewer than 25 firms
- FN Footnote on this item in place of data
- N Data for this geographic area cannot be displayed because the number of sample cases is too small.
- NA Not available
- S Suppressed; does not meet publication standards
- X Not applicable
- Z Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

ABOUT US

Are You In a Survey?
FAQs
Director's Corner
Regional Offices
History
Research
Scientific Integrity
Census Careers
Diversity @ Census
Business Opportunities
Congressional and Intergovernmental
Contact Us

FIND DATA

QuickFacts
American FactFinder
2010 Census
Economic Census
Interactive Maps
Training & Workshops
Data Tools
Developers
Catalogs
Publications

BUSINESS & INDUSTRY

Help With Your Forms
Economic Indicators
Economic Census
E-Stats
International Trade
Export Codes
NAICS
Governments
Longitudinal Employer-Household Dynamics (LEHD)
Survey of Business Owners

PEOPLE & HOUSEHOLDS

2020 Census
2010 Census
American Community Survey
Income
Poverty
Population Estimates
Population Projections
Health Insurance
Housing
International
Genealogy

SPECIAL TOPICS

Advisors, Centers and Research Programs
Statistics in Schools
Tribal Resources (AIAN)
Emergency Preparedness
Statistical Abstract
Special Census Program
Data Linkage Infrastructure
Fraudulent Activity & Scams
USA.gov

NEWSROOM

News Releases
Release Schedule
Facts for Features
Stats for Stories
Blogs

CONNECT WITH US

Accessibility | Information Quality | FOIA | Data Protection and Privacy Policy | U.S. Department of Commerce

DEFENDANTS' EX. 12

2/22/2020



Carl Vinson Institute of Government
University of Georgia

